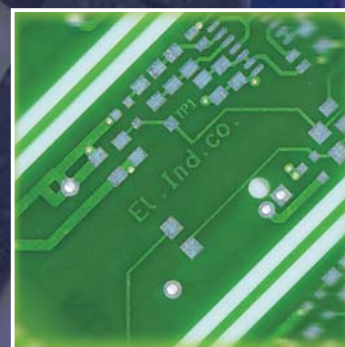
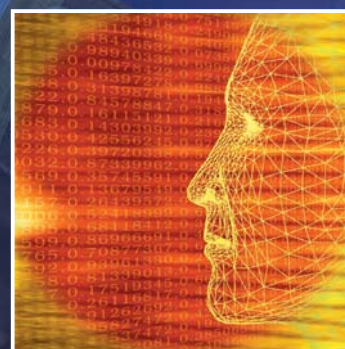


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www.elindco.it

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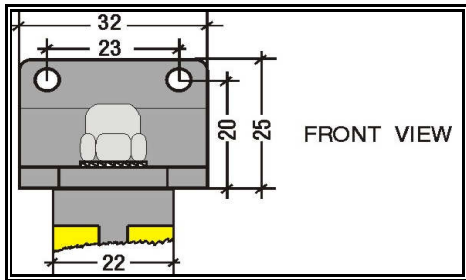
3 ^ Edition January 2013

QUICK GUIDE TO THE CHOICE OF MODEL "OPT3 SMC PXXX"

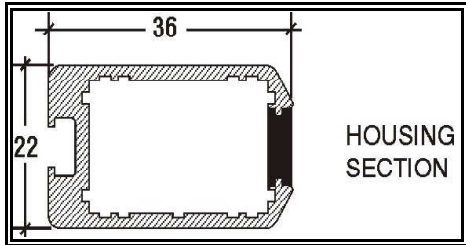
	Single Beam																						
Model	OPT3 P001	OPT3 P018	OPT3 P040	OPT3 P080	OPT3 P120	OPT3 P150	OPT3 P160	OPT3 P200	OPT3 P240	OPT3 P280	OPT3 P320	OPT3 P360	OPT3 P400										
Number rays	Height (HP) (HT)	Height (HP) (HT)	Height (HP) (HT)	Height (HP) (HT)	Height (HP) (HT)	Height (HP) (HT)	Height (HP) (HT)	Height (HP) (HT)	Height (HP) (HT)	Height (HP) (HT)	Height (HP) (HT)	Height (HP) (HT)	Height (HP) (HT)										
1 x 1	225																						
2 x 2					240	405	300	465	320	485	400	565	480	645	560	725	640	805	720	885	800	965	
3 x 3				320	485	480	645	600	765	640	805	800	965	960	1125	1120	1285	1280	1445	1440	1605	1600	1765
4 x 4			240	405	480	645	720	885	900	1065	960	1125	1200	1365	1440	1605	1680	1845	1920	2085			
5 x 5		144	309	320	485	640	805	960	1125	1200	1365	1280	1445	1600	1765	1920	2085						
6 x 6		180	345	400	565	800	965	1200	1365			1600	1765	2000	2165								
7 x 7		216	381	480	645	960	1125	1440	1605			1920	2085										
8 x 8		252	417	560	725	1120	1285	1680	1845														
9 x 9		288	453	640	805	1280	1445	1920	2085														
10 x 10		324	489	720	885	1440	1605																
11 x 11		360	525	800	965	1600	1765																
12 x 12		396	561	880	1045	1760	1925																
13 x 13		432	597	960	1125	1920	2085																
14 x 14		468	633	1040	1205																		
15 x 15		504	669	1120	1285																		
16 x 16		540	705	1200	1365																		
17 x 17		576	741	1280	1445																		
18 x 18		612	777	1360	1525																		
19 x 19		648	813	1440	1605																		
20 x 20		684	849	1520	1685																		
21 x 21		720	885	1600	1765																		
22 x 22		756	921	1680	1845																		
23 x 23		792	957	1760	1925																		
24 x 24		828	993	1840	2005																		
25 x 25		864	1029	1920	2085																		
26 x 26		900	1065																				
27 x 27		936	1101																				
28 x 28		972	1137																				
29 x 29		1008	1173																				
30 x 30		1044	1209																				
31 x 31		1080	1245																				
32 x 32		1116	1281																				
33 x 33		1152	1317																				

HP= Protected Height
HT= Total Height including orientable support brackets (SMO)
PXXX= Resolution of the lightguard (EX: P040= Resolution 40mm)


Note: In the columns all the important dimensions for the various sizes are reported. For the fixing holes interaxes 10 mm are to be deducted from the total height. In the drawings below are indicated the quote for fixing holes.



FRONT VIEW



HOUSING SECTION

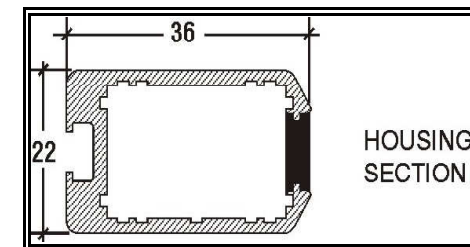
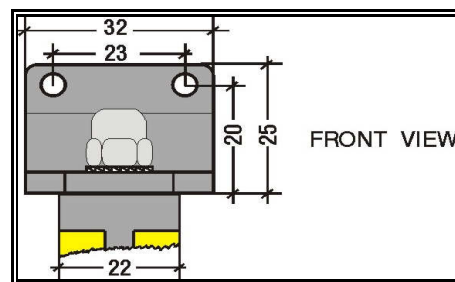


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HP= Protected Height
HT= Total Height including orientable support brackets (SMO)
PXXX= Resolution of the lightguard (EX: P040= Resolution 40mm)

Note: In the columns all the important dimensions for the various sizes are reported. For the fixing holes interaxes 10 mm are to be deducted from the total height. In the drawings below are indicated the quote for fixing holes.



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OPT3 SMC P001

MONORAY TYPE 2 - SIL 2 SILCL 2 PL d
MONORAY TYPE 4* - SIL 3* SILCL 3 PL e



Protected height **monoray**

Range **HP ÷ 30 meters**

Output **2 interruttori - ON/OFF**

Directives **2006/42/EC - 2004/108/EC - 2006/95/EC**

Standards **CEI-EN 61496/1 - CEI-CLC/TS 61496-2**

Certificate **N.0068/ETI - MAC/001-2010 Rev.2**

Safety Light Curtain Type 2 (Type 4*) with the following functions :

Start/Restart : automatic restart of the logic state of the device after an intervention and at its powering on

Test Input

It is supplied in series with a connector output M12 and with orientable support brackets (SMO)

(*) Upgrading to **TYPE 4** through a control unit BOX2/4 which implements the following functions :

- **Outputs** - 2 switches 5A/250V (mobile concatenated relays)
- **Led Diagnostic** for failures signalling and detection
- **EDM** (External Device Monitor)
- **Contact AUX (Ausiliario) NC** normally closed

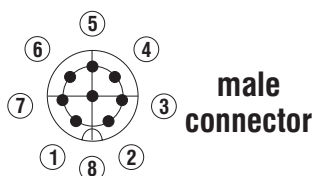
PROTECTED AREAS HEIGHT

Product Code	Protected Height HP mm	Total Height H mm	Response time ms	Number of controlled rays
OPT3-SMC-P001	monoray	225	6	1

Safety Category	TYPE 2 - SIL 2 SILCL 2 PL d / TIPO 4* - SIL 3* SILCL 3 PL e
Power Supply	24Vdc \pm 10%
Absorption TX Unit Absorption RX Unit	50 mA max 40 mA max
Output	2 switches SW1 - SW2 (ON/OFF) free from potential 0,75 Adc/ac @ 40Vdc/ac
Output Protection	Short circuit and overcharge through self restoring fuses. After an overcharge or shortcircuit it is necessary to power off and wait some seconds before the normal working restart
LED Signallings	TX Unit - Yellow Led = Power Supply RX Unit - Green Led = Active Protection - Red Led = Alarm
Housing	Polished aluminium RAL1021
Housing Section	22 x 36 mm
Protection Degree	IP54 (option IP67 - IP69K)
Working Temperature	0 / +55 °C
RX Connection TX Connection	Connector M12 female 8 poles shielded - lenght 10 meters Connector M12 female 5 poles shielded - lenght 10 meters
Fixing	SMO (orientable support brackets)

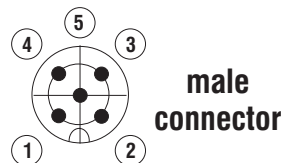
CONNECTION ELECTRIC DIAGRAM

RX

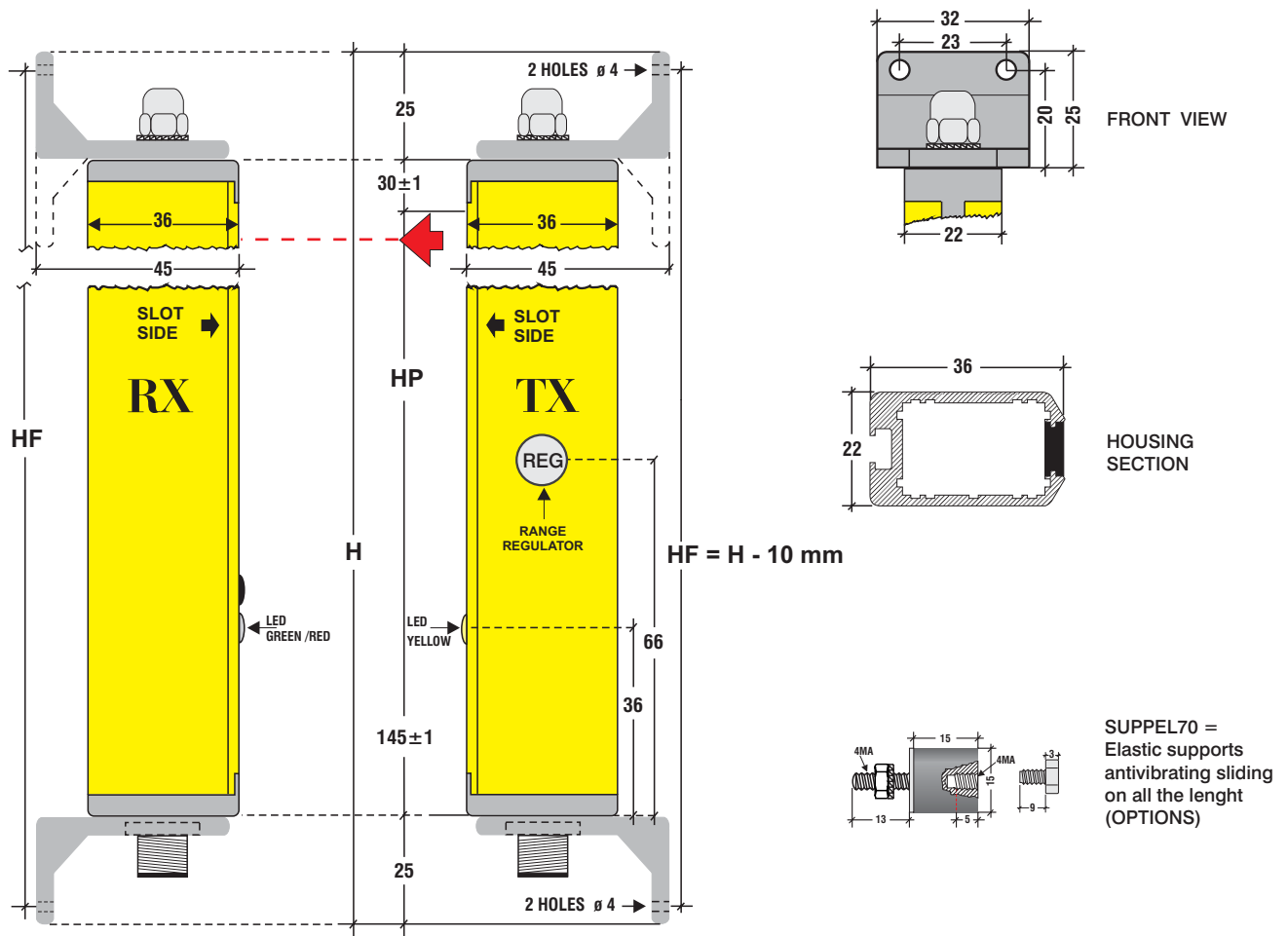


- 1) White = N.C.
- 2) Brown = + 24Vdc
- 3) Green = SW1
- 4) Yellow = SW2
- 5) Grey = SW2
- 6) Pink =
- 7) Blue =
- 8) Red = N.C.
- Shield =

TX



- 1) Brown = + 24Vdc
- 2) White = TEST INPUT
- 3) Blue =
- 4) Black = TEST INPUT
- 5) Grey = N.C.
- Shield =



OPTIONS (°°)

OUTPUT CABLE	Output with direct cable lenght 5 meters
SUPPEL 70	Supports for the direct mounting of the profile (not orientable)
CB60 IP67	IP67 protection
CB60 IP69K	IP69K protection

ACCESSORIES

COD 5	Cable TX M12 - 5 poles shielded 10 meters included in the supply
COD 8	Cable RX M12 - 8 poles shielded 10 meters included in the supply
BOX 2/4 (*)	External control unit for TYPE 4 upgrading
BOX-MUT	External control unit for neutralization - MUTING
SPV100	Mirrors at V for enclosures
SPV100 PLUS	Mirrors at V UNBREAKABLE for enclosures

HOW TO ORDER

Product Code	Distances	Mounting	Maximum Range between TX and RX
OPT3-SMC-P001 -	-	SMO	NR = HP ... 16 meters
			MR = 16 ... 30 meters

Working distance in mm.
To be indicated on the order. The Light Curtain will be supplied pre-calibrated for an **immediate adjustment**

Example : OPT3 SMC-P001 - 1000 - NR - SMO



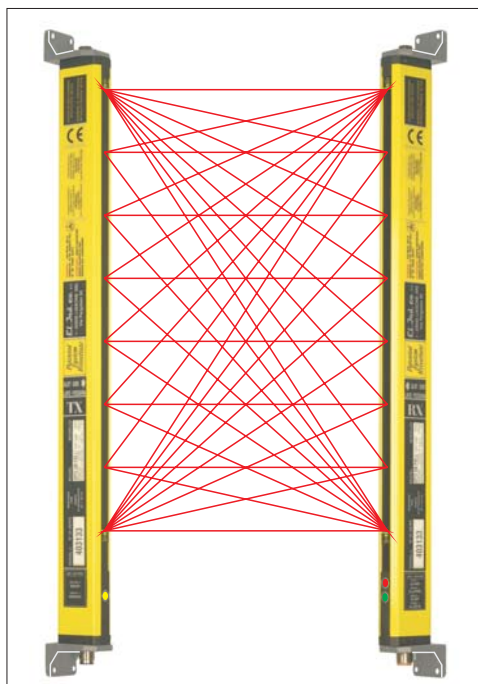
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OPT3 SMC P018

Safety Light Curtain TYPE 2 - SIL 2 SILCL 2 PL d
Safety Light Curtain TYPE 4* - SIL 3* SILCL 3 PL e



Resolution	18 mm - finger
Protected Height	144 ÷ 1152 mm
Range	HP ÷ 16 meters
Output	2 switches - ON/OFF
Directives	2006/42/EC - 2004/108/EC - 2006/95/EC
Standards	CEI-EN 61496/1 - CEI-CLC/TS 61496-2
Certificate	N.0068/ETI - MAC/001-2010 Rev.2

Safety Light Curtain Type 2 (*) with the following functions :

Start/Restart : automatic restart of the logic state of the device after an intervention and at its powering on (Standard Model)

SRS/EDM : SRS = start restart automatic /manual after an intervention and at its powering on + EDM (External Device Monitoring) choosing the option SRS/EDM

Test Input

It is supplied in series with a connector output M12 and with orientable support brackets (SMO)

(*) Upgrading to **TYPE 4** through a control unit BOX2/4 which implements the following functions :

- **Outputs** - 2 switches 5A/250V (mobile concatenated relays) - **Led Diagnostic** for failures signalling and detection
- **EDM** (External Device Monitoring) - **Contact AUX (Auxiliary) NC** normally closed

PROTECTED AREAS HEIGHT

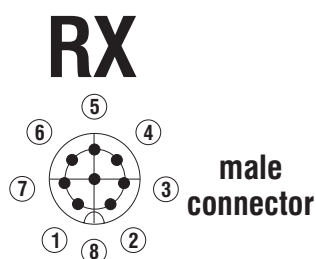
Product Code	Protected Height HP mm	Total height H mm	Response time ms	Number of controlled rays
OPT3-SMC-P018-0144	144	309	23	5x5
OPT3-SMC-P018-0180	180	345	25	6x6
OPT3-SMC-P018-0216	216	381	28	7x7
OPT3-SMC-P018-0252	252	417	30	8x8
OPT3-SMC-P018-0288	288	453	33	9x9
OPT3-SMC-P018-0324	324	489	35	10x10
OPT3-SMC-P018-0360	360	525	38	11x11
OPT3-SMC-P018-0396	396	561	40	12x12
OPT3-SMC-P018-0432	432	597	43	13x13
OPT3-SMC-P018-0468	468	633	45	14x14
OPT3-SMC-P018-0504	504	669	48	15x15
OPT3-SMC-P018-0540	540	705	50	16x16
OPT3-SMC-P018-0576	576	741	53	17x17
OPT3-SMC-P018-0612	612	777	55	18x18
OPT3-SMC-P018-0648	648	813	58	19x19
OPT3-SMC-P018-0684	684	849	60	20x20
OPT3-SMC-P018-0720	720	885	63	21x21
OPT3-SMC-P018-0756	756	921	65	22x22
OPT3-SMC-P018-0792	792	957	68	23x23
OPT3-SMC-P018-0828	828	993	70	24x24
OPT3-SMC-P018-0864	864	1029	73	25x25
OPT3-SMC-P018-0900	900	1065	75	26x26
OPT3-SMC-P018-0936	936	1101	78	27x27
OPT3-SMC-P018-0972	972	1137	80	28x28
OPT3-SMC-P018-1008	1008	1173	83	29x29
OPT3-SMC-P018-1044	1044	1209	85	30x30
OPT3-SMC-P018-1080	1080	1245	88	31x31
OPT3-SMC-P018-1116	1116	1281	90	32x32
OPT3-SMC-P018-1152	1152	1317	93	33x33



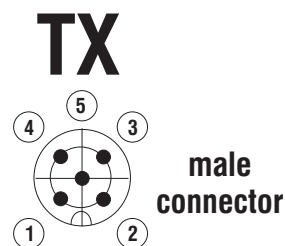
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Safety Category	TYPE 2 - SIL 2 SILCL 2 PL d / TIPO 4* - SIL 3* SILCL 3 PL e
Power Supply	24Vdc \pm 10%
Absorption TX Unit	80 mA max
Absorption RX Unit	70 mA max
Output	2 switches SW1 - SW2 (ON/OFF) free from potential 200 mA dc @ 24Vdc
Output Protection	Short circuit and overcharge through self restoring fuses. After an overcharge or shortcircuit it is necessary to power off and wait some seconds before the normal working restart
LED Signallings	<p>TX Unit</p> <ul style="list-style-type: none"> - Yellow Led = Power Supply <p>RX Unit</p> <ul style="list-style-type: none"> - Green Led = Active Protection - Red Led = Alarm - Orange Led ON = Manual Operation - Orange Led blinking = Waiting for RESTART - Orange Led OFF = Automatic Operation <p><i>present only with the OPTION SRS/EDM</i></p>
Housing	Polished aluminium RAL1021
Housing Section	22 x 36 mm
Protection Degree	IP54 (option IP67 - IP69K)
Working Temperature	0 / +55 °C
RX Connection	Connector M12 female 8 poles shielded - lenght 10 meters
TX Connection	Connector M12 female 5 poles shielded - lenght 10 meters
Fixing	SMO (orientable support brackets)

CONNECTION ELECTRIC DIAGRAM (Standard Model)


- 1) White = N.C.
- 2) Brown = + 24Vdc
- 3) Green = SW1
- 4) Yellow = SW2
- 5) Grey =
- 6) Pink =
- 7) Blue =
- 8) Red = N.C.
- Shield =

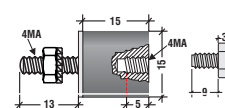
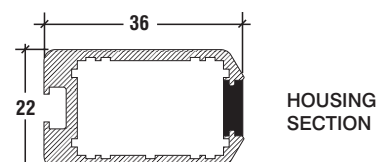
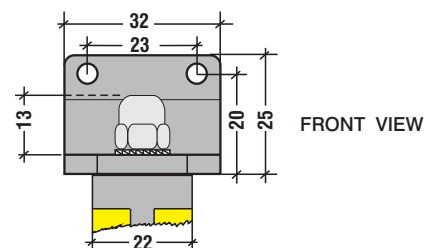
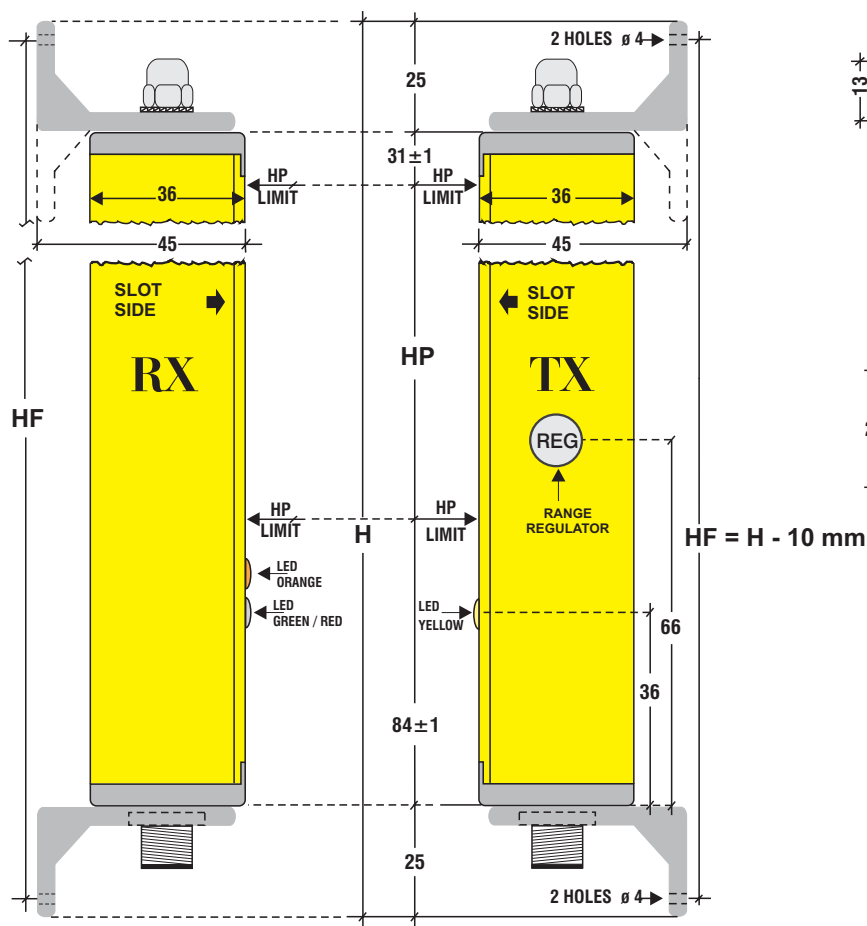


- 1) Brown = + 24Vdc
- 2) White = TEST INPUT
- 3) Blue =
- 4) Black = TEST INPUT
- 5) Grey = N.C.
- Shield =

TEST INPUT = Connect the 2 threads, white and black is simulated the interruption of the curtain test the correct opening of the outputs SW1 - SW2 of the receiving unit

⁽¹⁾Leave close if not used

SIDE VIEW



SUPPEL70 =
Elastic supports
antivibrating sliding
on all the length
(OPTIONS)

OPTIONS (°°)

SRS / EDM	Start Restart automatic/manual + EDM (External Device Monitoring)
OUTPUT CABLE	Output with direct cable length 5 meters
SUPPEL 70	Supports for the direct mounting of the profile (not orientable)
CB60 IP67	IP67 protection
CB60 IP69K	IP69K protection

ACCESSORIES

COD 5	Cable TX M12 - 5 poles shielded 10 meters included in the supply
COD 8	Cable RX M12 - 8 poles shielded 10 meters included in the supply
BOX 2/4 (*)	External control unit for TYPE 4 upgrading
BOX-MUT	External control unit for neutralization - MUTING
SPV100	Mirrors at V for enclosures
SPV100 PLUS	Mirrors at V UNBREAKABLE for enclosures

HOW TO ORDER

Product Code	Distance	Mounting	OPTIONS (°°)	Maximum Range between TX and RX
OPT3-SMC-P018-0900	-	- SMO	-	NR = HP ... 6 meters MR = 6 ... 16 meters

Working distance in mm.

To be indicated on the order. The Light Curtain will be supplied pre-calibrated for an **immediate adjustment**

Example : OPT3 SMC-P018-0900 - 1000 - NR - SMO - SRS/EDM



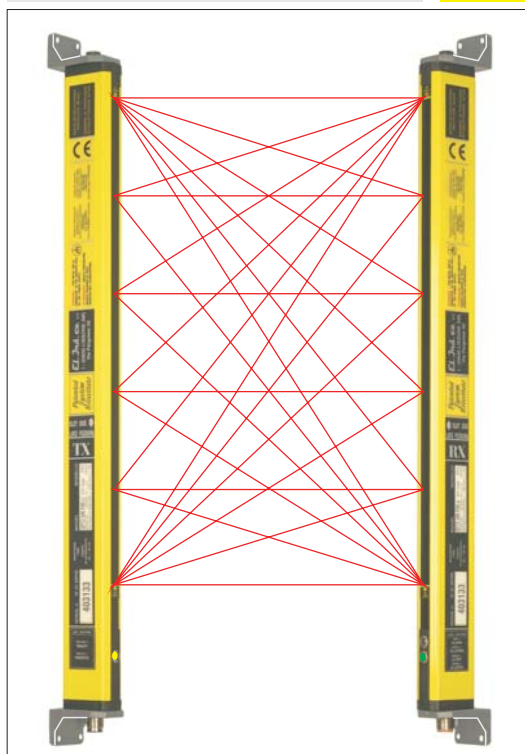
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OPT3 SMC P040

Safety Light Curtain TYPE 2 - SIL 2 SILCL 2 PL d
Safety Light Curtain TYPE 4* - SIL 3* SILCL 3 PL e



Resolution 40mm - hand

Protected Height 240 ÷ 1920 mm

Range HP ÷ 30 meters

Output 2 switches - ON/OFF

Directives 2006/42/EC - 2004/108/EC - 2006/95/EC

Standards CEI-EN 61496/1 - CEI-CLC/TS 61496-2

Certificate N.0068/ETI - MAC/001-2010 Rev.2

Safety Light Curtain Type 2 (*) with the following functions :

Start/Restart : automatic restart of the logic state of the device after an intervention and at its powering on (Standard Model)

SRS/EDM : SRS = start restart automatic /manual after an intervention and at its powering on + EDM (External Device Monitoring) choosing the option SRS/EDM

Test Input

It is supplied in series with a connector output M12 and with orientable support brackets (SMO)

(*) Upgrading to **TYPE 4** through a control unit BOX2/4 which implements the following functions :

- **Outputs** - 2 switches 5A/250V (mobile concatenated relays) - **Led Diagnostic** for failures signalling and detection
- **EDM** (External Device Monitoring) - **Contact AUX (Auxiliary) NC** normally closed

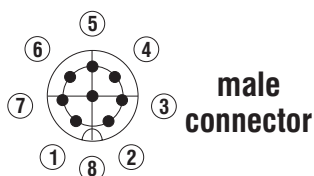
PROTECTED AREAS HEIGHT

Product Code	Protected Height HP mm	Total Height H mm	Response time ms	Number of controlled rays
OPT3-SMC-P040-0240	240	405	20	4x4
OPT3-SMC-P040-0320	320	485	23	5x5
OPT3-SMC-P040-0400	400	565	25	6x6
OPT3-SMC-P040-0480	480	645	28	7x7
OPT3-SMC-P040-0560	560	725	30	8x8
OPT3-SMC-P040-0640	640	805	33	9x9
OPT3-SMC-P040-0720	720	885	35	10x10
OPT3-SMC-P040-0800	800	965	38	11x11
OPT3-SMC-P040-0880	880	1045	40	12x12
OPT3-SMC-P040-0960	960	1125	43	13x13
OPT3-SMC-P040-1040	1040	1205	45	14x14
OPT3-SMC-P040-1120	1120	1285	48	15x15
OPT3-SMC-P040-1200	1200	1365	50	16x16
OPT3-SMC-P040-1280	1280	1445	53	17x17
OPT3-SMC-P040-1360	1360	1525	55	18x18
OPT3-SMC-P040-1440	1440	1605	58	19x19
OPT3-SMC-P040-1520	1520	1685	60	20x20
OPT3-SMC-P040-1600	1600	1765	63	21x21
OPT3-SMC-P040-1680	1680	1845	65	22x22
OPT3-SMC-P040-1760	1760	1925	68	23x23
OPT3-SMC-P040-1840	1840	2005	70	24x24
OPT3-SMC-P040-1920	1920	2085	73	25x25

Safety Category	TYPE 2 - SIL 2 SILCL 2 PL d / TIPO 4* - SIL 3* SILCL 3 PL e
Power Supply	24Vdc \pm 10%
Absorption TX Unit	80 mA max
Absorption RX Unit	70 mA max
Output	2 switches SW1 - SW2 (ON/OFF) free from potential 1Adc/ac @ 40Vdc/ac
Output Protection	Short circuit and overcharge through self restoring fuses. After an overcharge or shortcircuit it is necessary to power off and wait some seconds before the normal working restart
LED Signallings	<p>TX Unit</p> <ul style="list-style-type: none"> - Yellow Led = Power Supply <p>RX Unit</p> <ul style="list-style-type: none"> - Green Led = Active Protection - Red Led = Alarm - Orange Led ON = Manual Operation - Orange Led blinking = Waiting for RESTART - Orange Led OFF = Automatic Operation <p><i>present only with the OPTION SRS/EDM</i></p>
Housing	Polished aluminium RAL1021
Housing Section	22 x 36 mm
Protection Degree	IP54 (option IP67 - IP69K)
Working Temperature	0 / +55 °C
RX Connection	Connector M12 female 8 poles shielded - lenght 10 meters
TX Connection	Connector M12 female 5 poles shielded - lenght 10 meters
Fixing	SMO (orientable support brackets)

CONNECTION ELECTRIC DIAGRAM (Standard Model)

RX



- 1) White = N.C.
- 2) Brown = + 24Vdc
- 3) Green = SW1
- 4) Yellow = SW2
- 5) Grey = SW2
- 6) Pink = SW1
- 7) Blue = -
- 8) Red = N.C.
- Shield =

TX

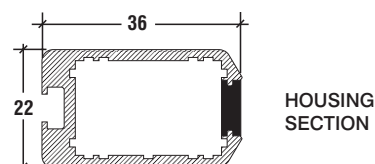
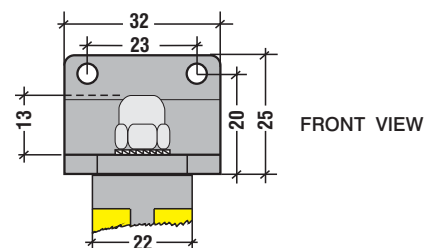


- 1) Brown = + 24Vdc
- 2) White = TEST INPUT
- 3) Blue = -
- 4) Black = TEST INPUT
- 5) Grey = N.C.
- Shield =

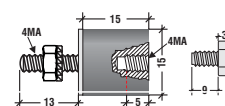
TEST INPUT = Connect the 2 threads, white and black is simulated the interruption of the curtain test the correct opening of the outputs SW1 - SW2 of the receiving unit

The drawing shows two modules, RX and TX, with the following dimensions and labels:

- Overall Width:** 45
- Module Width:** 36
- Top Mounting:** 2 HOLES $\varnothing 4$
- HP LIMIT:** Indicated on both sides of the module width.
- Slot Side:** Labeled on the top of the RX module and the bottom of the TX module.
- HF:** Label on the left side of the RX module.
- HP:** Label between the two modules.
- TX:** Label on the front of the TX module.
- REG:** Label for the RANGE REGULATOR on the TX module.
- LED ORANGE:** Label for the orange LED on the RX module.
- LED GREEN / RED:** Label for the green/red LED on the RX module.
- LED YELLOW:** Label for the yellow LED on the TX module.
- Dimensions:**
 - Top distance: 25
 - Distance between HP LIMIT lines: 31 ± 1
 - Bottom distance: 84 ± 1
 - Distance from bottom of TX module to LED: 66
 - Distance from bottom of TX module to HP LIMIT line: 36
 - Bottom distance: 25
 - Bottom Mounting: 2 HOLES $\varnothing 4$



$$HF = H - 10 \text{ mm}$$



SUPPEL70 =
Elastic supports
antivibrating sliding
on all the lenght
(OPTIONS)

SRS / EDM	Start Restart automatic/manual + EDM (External Device Monitoring)
OUTPUT CABLE	Output with direct cable length 5 meters
SUPPEL 70	Supports for the direct mounting of the profile (not orientable)
CB60 IP67	IP67 protection
CB60 IP69K	IP69K protection

COD 5	Cable TX M12 - 5 poles shielded 10 meters included in the supply
COD 8	Cable RX M12 - 8 poles shielded 10 meters included in the supply
BOX 2/4 (*)	External control unit for TYPE 4 upgrading
BOX-MUT	External control unit for neutralization - MUTING
SPV100	Mirrors at V for enclosures
SPV100 PLUS	Mirrors at V UNBREAKABLE for enclosures

Product Code	Distance	Mounting	OPTIONS (°°)	Maximum Range between TX and RX
OPT3-SMC-P040-0560	- - - -	- SMO	- - - -	NR = HP ... 6 meters MR = 6 ... 16 meters HR = 16 ... 30 meters

To be indicated on the order. The Light Curtain will be supplied pre-calibrated for an **immediate adjustment**

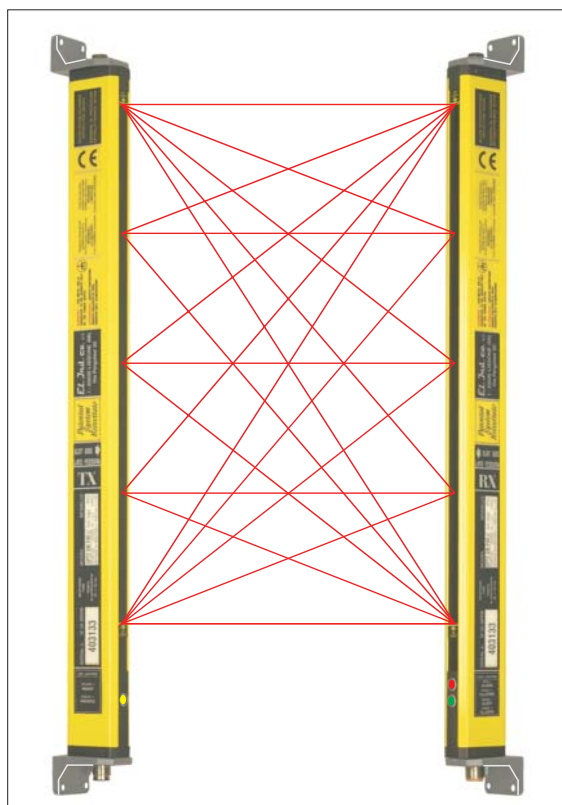
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OPT3 SMC P080

Safety Light Curtain TYPE 2 - SIL 2 SILCL 2 PL d
Safety Light Curtain TYPE 4* - SIL 3* SILCL 3 PL e



Resolution 80 mm - arm

Protected Height 320 ÷ 1920 mm

Range HP ÷ 30 meters

Output 2 switches - ON/OFF

Directives 2006/42/EC - 2004/108/EC - 2006/95/EC

Standards CEI-EN 61496/1 - CEI-CLC/TS 61496-2

Certificate N.0068/ETI - MAC/001-2010 Rev.2

Safety Light Curtain Type2 (*) with the following functions :

Start/Restart : automatic restart of the logic state of the device after an intervention and at its powering on (Standard Model)

SRS/EDM : SRS = start restart automatic /manual after an intervention and at its powering on + EDM (External Device Monitoring) choosing the option SRS/EDM

Test Input

It is supplied in series with a connector output M12 and with orientable support brackets (SMO)

(*) Upgrading to **TYPE 4** through a control unit BOX2/4 which implements the following functions :

- **Outputs** - 2 switches 5A/250V (mobile concatenated relays) - **Led Diagnostic** for failures signalling and detection
- **EDM** (External Device Monitoring) - **Contact AUX (Auxiliary) NC** normally closed

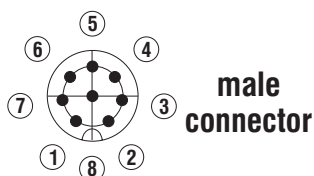
PROTECTED AREAS HEIGHT

Product Code	Protected Height HP mm	Total Height H mm	Response time ms	Number of controlled rays
OPT3-SMC-P080-0320	320	485	18	3x3
OPT3-SMC-P080-0480	480	645	20	4x4
OPT3-SMC-P080-0640	640	805	23	5x5
OPT3-SMC-P080-0800	800	965	25	6x6
OPT3-SMC-P080-0960	960	1125	28	7x7
OPT3-SMC-P080-1120	1120	1285	30	8x8
OPT3-SMC-P080-1280	1280	1445	33	9x9
OPT3-SMC-P080-1440	1440	1605	35	10x10
OPT3-SMC-P080-1600	1600	1765	38	11x11
OPT3-SMC-P080-1760	1760	1925	40	12x12
OPT3-SMC-P080-1920	1920	2085	43	13x13

Safety Category	TYPE 2 - SIL 2 SILCL 2 PL d / TIPO 4* - SIL 3* SILCL 3 PL e
Power Supply	24Vdc \pm 10%
Absorption TX Unit	80 mA max
Absorption RX Unit	70 mA max
Output	2 switches SW1 - SW2 (ON/OFF) free from potential 1Adc/ac @ 40Vdc/ac
Output Protection	Short circuit and overcharge through self restoring fuses. After an overcharge or shortcircuit it is necessary to power off and wait some seconds before the normal working restart
LED Signallings	<p>TX Unit</p> <ul style="list-style-type: none"> - Yellow Led = Power Supply <p>RX Unit</p> <ul style="list-style-type: none"> - Green Led = Active Protection - Red Led = Alarm - Orange Led ON = Manual Operation - Orange Led blinking = Waiting for RESTART - Orange Led OFF = Automatic Operation <p><i>present only with the OPTION SRS/EDM</i></p>
Housing	Polished aluminium RAL1021
Housing Section	22 x 36 mm
Protection Degree	IP54 (option IP67 - IP69K)
Working Temperature	0 / +55 °C
RX Connection	Connector M12 female 8 poles shielded - lenght 10 meters
TX Connection	Connector M12 female 5 poles shielded - lenght 10 meters
Fixing	SMO (orientable support brackets)

CONNECTION ELECTRIC DIAGRAM (Standard Model)

RX



- 1) White = N.C.
- 2) Brown = + 24Vdc
- 3) Green = SW1
- 4) Yellow = SW2
- 5) Grey = SW2
- 6) Pink = SW1
- 7) Blue = -
- 8) Red = N.C.
- Shield =

TX



- 1) Brown = + 24Vdc
- 2) White = TEST INPUT
- 3) Blue = -
- 4) Black = TEST INPUT
- 5) Grey = N.C.
- Shield =

TEST INPUT = Connect the 2 threads, white and black is simulated the interruption of the curtain test the correct opening of the outputs SW1 - SW2 of the receiving unit

RX

Manual Operation

SRS/EDM = White
 + 24Vdc = Brown
 SW1 = Green
 SW2 = Yellow
 = Grey
 = Pink
 - = Blue
 MODE = Red
 = Shield

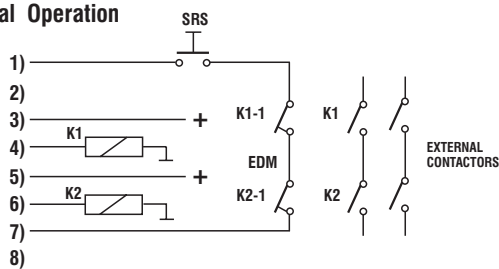


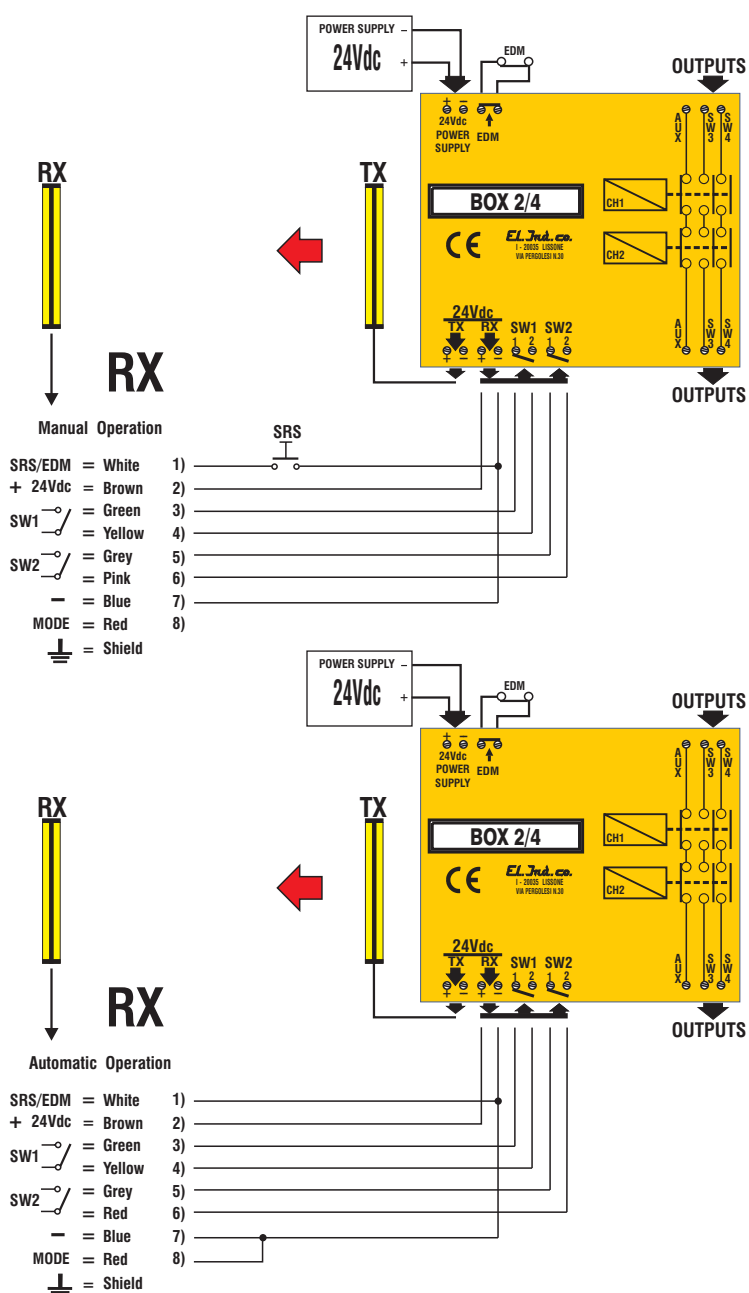
Table Operative Mode

	RED	WHITE ⁽¹⁾	
	MODE	SRS	EDM
AUTOMATIC	0 Volt	X	✓/X
MANUAL	NC	✓	✓/X

⁽¹⁾Leave close if not used

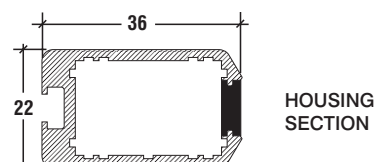
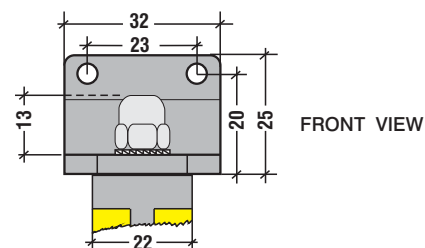
To connect the TX refer to the diagram on page 2

CONNECTION ELECTRIC DIAGRAM (model Type 4 with option SRS/EDM)

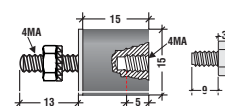


The drawing shows two modules, RX and TX, with the following dimensions and labels:

- Overall Dimensions:**
 - Width: 45
 - Height: 66
 - Module Height: 36
 - Mounting Hole Spacing: 25
 - Mounting Hole Diameter: 2 HOLES $\varnothing 4$
- Module RX (Left):**
 - Label: **RX**
 - Slot Side: **SLOT SIDE** (indicated by an arrow pointing right)
 - HP Limit: **HP LIMIT** (indicated by an arrow pointing left)
 - LED Indicators:
 - LED ORANGE
 - LED GREEN / RED
- Module TX (Right):**
 - Label: **TX**
 - Slot Side: **SLOT SIDE** (indicated by an arrow pointing left)
 - HP Limit: **HP LIMIT** (indicated by an arrow pointing right)
 - Range Regulator: **REG** (indicated by an arrow pointing up to the label **RANGE REGULATOR**)
 - LED Indicator: **LED YELLOW** (indicated by an arrow pointing right)
- Other Dimensions:**
 - Distance between module centers: 31 ± 1
 - Distance from top edge to module top: 25
 - Distance from bottom edge to module bottom: 84 ± 1
 - Distance from module top to LED indicators: 36
 - Distance from module bottom to LED indicators: 66



$$HF = H - 10 \text{ mm}$$



SUPPEL70 =
Elastic supports
antivibrating sliding
on all the lenght
(OPTIONS)

SRS / EDM	Start Restart automatic/manual + EDM (External Device Monitoring)
OUTPUT CABLE	Output with direct cable lenght 5 meters
SUPPEL 70	Supports for the direct mounting of the profile (not orientable)
CB60 IP67	IP67 protection
CB60 IP69K	IP69K protection

COD 5	Cable TX M12 - 5 poles shielded 10 meters included in the supply
COD 8	Cable RX M12- 8 poles shielded 10 meters included in the supply
BOX 2/4 (*)	External control unit for TYPE 4 upgrading
BOX-MUT	External control unit for neutralization - MUTING
SPV100	Mirrors at V for enclosures
SPV100 PLUS	Mirrors at V UNBREAKABLE for enclosures

Product Code	Distance	Mounting	OPTIONS (°)	Maximum Range between TX and RX
OPT3-SMC-P080-0800	- - - -	- SMO	- - - -	NR = HP ... 6 meters MR = 6 ... 16 meters HR = 16 ... 30 meters

To be indicated on the order. The Light Curtain will be supplied pre-calibrated for an **immediate adjustment**

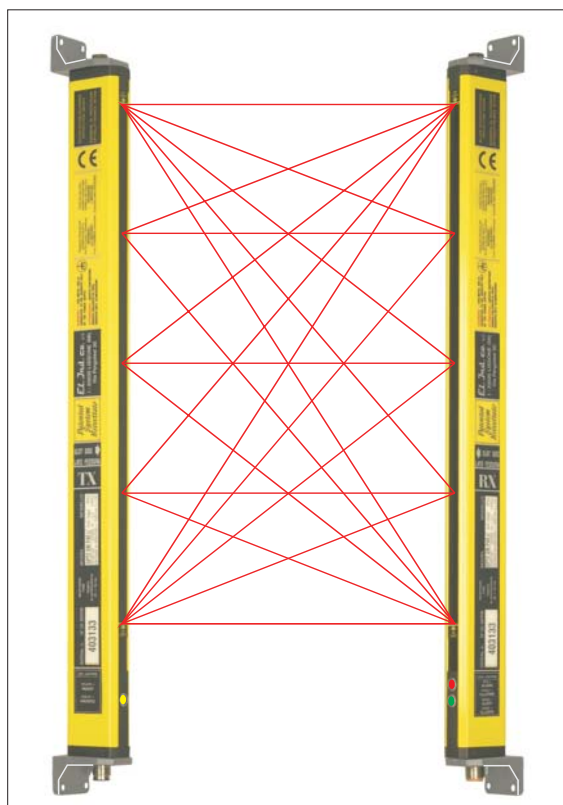
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OPT3 SMC P120

Safety Light Curtain TYPE 2 - SIL 2 SILCL 2 PL d
Safety Light Curtain TYPE 4* - SIL 3* SILCL 3 PL e



Resolution 120 mm - body

Protected Height 240 ÷ 1920 mm

Range HP ÷ 30 meters

Output 2 switches - ON/OFF

Directives 2006/42/EC - 2004/108/EC - 2006/95/EC

Standards CEI-EN 61496/1 - CEI-CLC/TS 61496-2

Certificate N.0068/ETI - MAC/001-2010 Rev.2

Safety Light Curtain Type2 (*) with the following functions :

Start/Restart : automatic restart of the logic state of the device after an intervention and at its powering on (Standard Model)

SRS/EDM : SRS = start restart automatic /manual after an intervention and at its powering on + EDM (External Device Monitoring) choosing the option SRS/EDM

Test Input

It is supplied in series with a connector output M12 and with orientable support brackets (SMO)

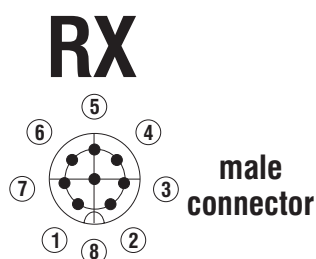
(*) Upgrading to **TYPE 4** through a control unit BOX2/4 which implements the following functions :

- **Outputs** - 2 switches 5A/250V (mobile concatenated relays)
- **EDM** (External Device Monitoring)
- **Led Diagnostic** for failures signalling and detection
- **Contact AUX (Auxiliary) NC** normally closed

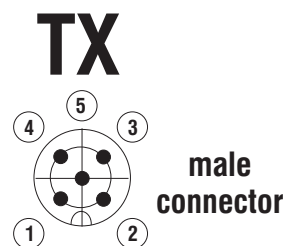
PROTECTED AREAS HEIGHT

Product Code	Protected Height HP mm	Total Height H mm	Response time ms	Number of controlled rays
OPT3-SMC-P120-0240	240	405	15	2x2
OPT3-SMC-P120-0480	480	645	18	3x3
OPT3-SMC-P120-0720	720	885	20	4x4
OPT3-SMC-P120-0960	960	1125	23	5x5
OPT3-SMC-P120-1200	1200	1365	25	6x6
OPT3-SMC-P120-1440	1440	1605	28	7x7
OPT3-SMC-P120-1680	1680	1845	30	8x8
OPT3-SMC-P120-1920	1920	2085	33	9x9

Safety Category	TYPE 2 - SIL 2 SILCL 2 PL d / TIPO 4* - SIL 3* SILCL 3 PL e
Power Supply	24Vdc \pm 10%
Absorption TX Unit	80 mA max
Absorption RX Unit	70 mA max
Output	2 switches SW1 - SW2 (ON/OFF) free from potential 1Adc/ac @ 40Vdc/ac
Output Protection	Short circuit and overcharge through self restoring fuses. After an overcharge or shortcircuit it is necessary to power off and wait some seconds before the normal working restart
LED Signallings	<p>TX Unit</p> <ul style="list-style-type: none"> - Yellow Led = Power Supply <p>RX Unit</p> <ul style="list-style-type: none"> - Green Led = Active Protection - Red Led = Alarm - Orange Led ON = Manual Operation - Orange Led blinking = Waiting for RESTART - Orange Led OFF = Automatic Operation <p><i>present only with the OPTION SRS/EDM</i></p>
Housing	Polished aluminium RAL1021
Housing Section	22 x 36 mm
Protection Degree	IP54 (option IP67 - IP69K)
Working Temperature	0 / +55 °C
RX Connection	Connector M12 female 8 poles shielded - lenght 10 meters
TX Connection	Connector M12 female 5 poles shielded - lenght 10 meters
Fixing	SMO (orientable support brackets)

CONNECTION ELECTRIC DIAGRAM (Standard Model)


- 1) White = N.C.
- 2) Brown = + 24Vdc
- 3) Green = SW1
- 4) Yellow = SW2
- 5) Grey = SW2
- 6) Pink = SW1
- 7) Blue = -
- 8) Red = N.C.
- Shield =

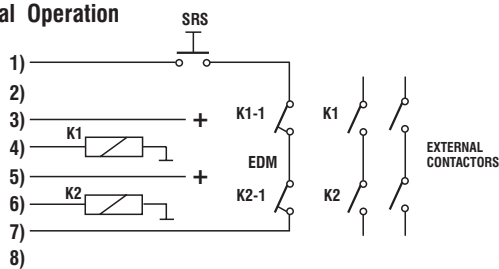


- 1) Brown = + 24Vdc
- 2) White = TEST INPUT
- 3) Blue = -
- 4) Black = TEST INPUT
- 5) Grey = N.C.
- Shield =

TEST INPUT = Connect the 2 threads, white and black is simulated the interruption of the curtain test the correct opening of the outputs SW1 - SW2 of the receiving unit

RX**Manual Operation**

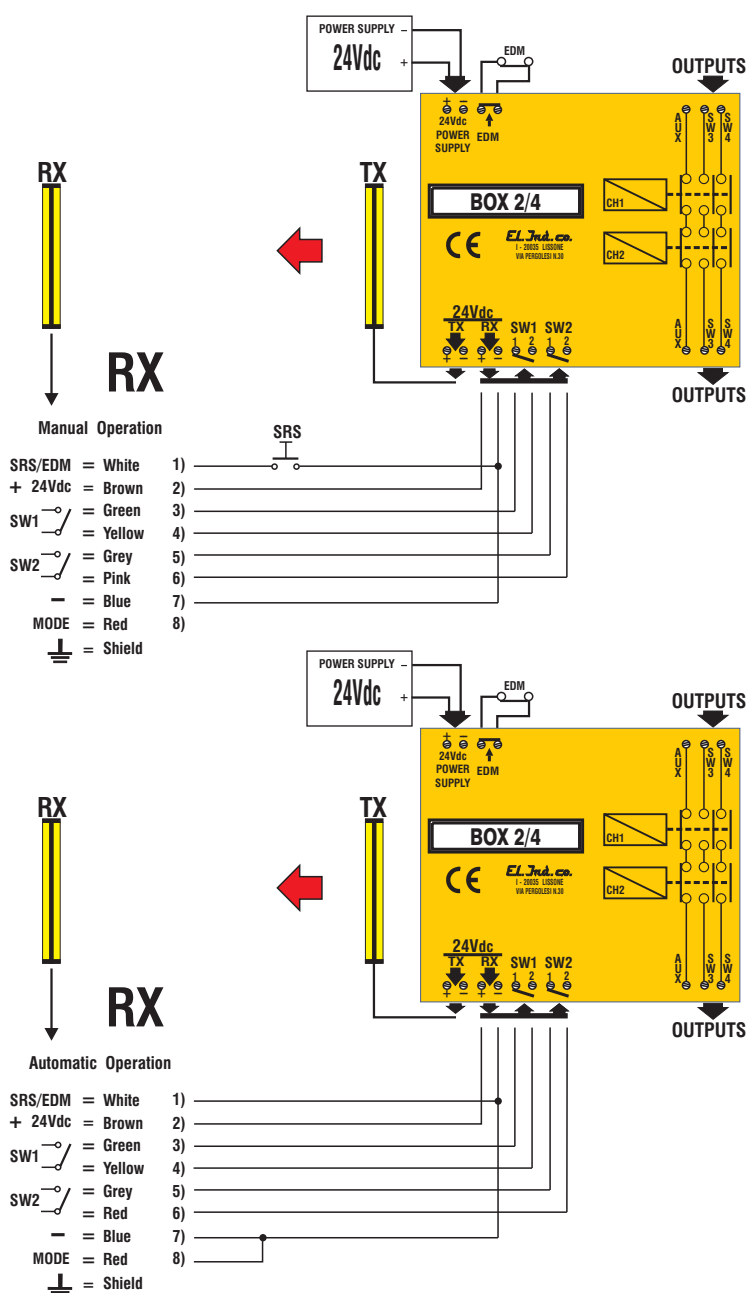
SRS/EDM = White
 + 24Vdc = Brown
 SW1 = Green
 SW2 = Yellow
 = Grey
 = Pink
 - = Blue
 MODE = Red
 = Shield

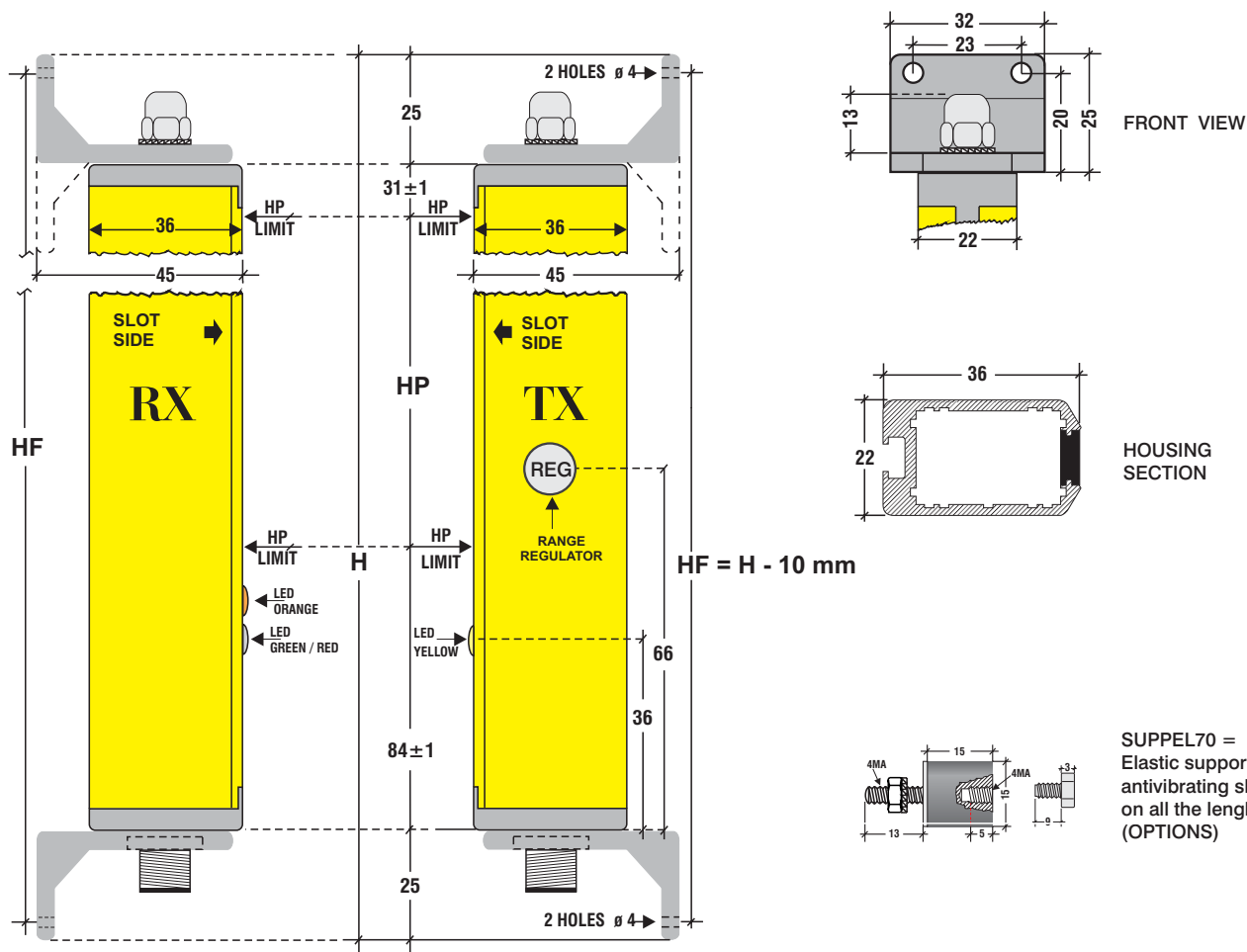
**Table Operative Mode**

	RED	WHITE ⁽¹⁾	
	MODE	SRS	EDM
AUTOMATIC	0 Volt	X	✓/X
MANUAL	NC	✓	✓/X

⁽¹⁾Leave close if not used**To connect the TX** refer to the diagram on page 2

CONNECTION ELECTRIC DIAGRAM (model Type 4 with option SRS/EDM)





OPTIONS (°°)

SRS / EDM	Start Restart automatic/manual + EDM (External Device Monitoring)
OUTPUT CABLE	Output with direct cable lenght 5 meters
SUPPEL 70	Supports for the direct mounting of the profile (not orientable)
CB60 IP67	IP67 protection
CB60 IP69K	IP69K protection

ACCESSORIES

COD 5	Cable TX M12 - 5 poles shielded 10 meters included in the supply
COD 8	Cable RX M12 - 8 poles shielded 10 meters included in the supply
BOX 2/4 (*)	External control unit for TYPE 4 upgrading
BOX-MUT	External control unit for neutralization - MUTING
SPV100	Mirrors at V for enclosures
SPV100 PLUS	Mirrors at V UNBREAKABLE for enclosures

HOW TO ORDER

Product Code	Distance	Mounting	OPTIONS (°°)	Maximum Range between TX and RX
OPT3-SMC-P120-1920	-	- SMO	-	NR = HP ... 6 meters MR = 6 ... 16 meters HR = 16 ... 30 meters

Working distance in mm.

To be indicated on the order. The Light Curtain will be supplied pre-calibrated for an **immediate adjustment**

Example : OPT3 SMC-P120-1920 - 1000 - NR - SMO - SRS/EDM

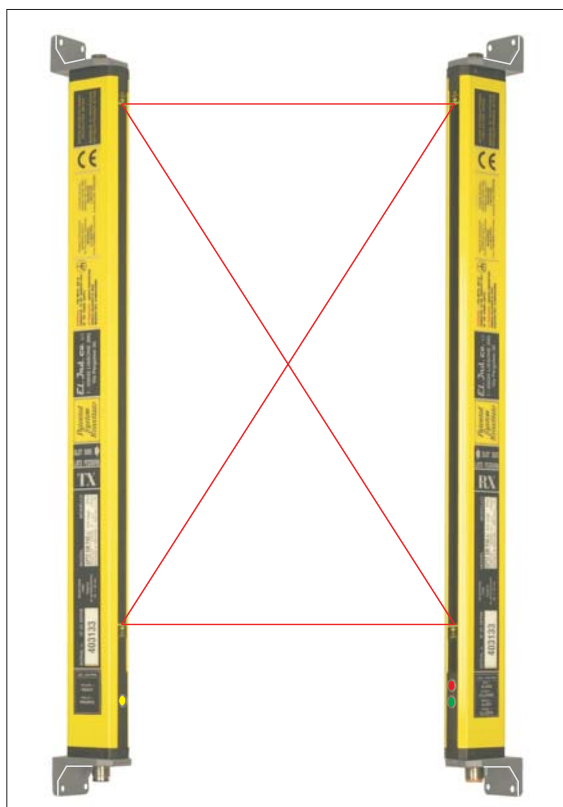


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OPT3 SMC P150

Safety Light Curtain TYPE 2 - SIL 2 SILCL 2 PL d
Safety Light Curtain TYPE 4* - SIL 3* SILCL 3 PL e



Resolution 150 mm - access

Protected Height 300 ÷ 1200 mm

Range HP ÷ 30 meters

Output 2 switches - ON/OFF

Directives 2006/42/EC - 2004/108/EC - 2006/95/EC

Standards CEI-EN 61496/1 - CEI-CLC/TS 61496-2

Certificate N.0068/ETI - MAC/001-2010 Rev.2

Safety Light Curtain Type2 (*) with the following functions :

Start/Restart : automatic restart of the logic state of the device after an intervention and at its powering on (Standard Model)

SRS/EDM : SRS = start restart automatic /manual after an intervention and at its powering on + EDM (External Device Monitoring) choosing the option SRS/EDM

Test Input

It is supplied in series with a connector output M12 and with orientable support brackets (SMO)

(*) Upgrading to **TYPE 4** through a control unit BOX2/4 which implements the following functions :

- **Outputs** - 2 switches 5A/250V (mobile concatenated relays) - **Led Diagnostic** for failures signalling and detection
- **EDM** (External Device Monitoring) - **Contact AUX (Auxiliary) NC** normally closed

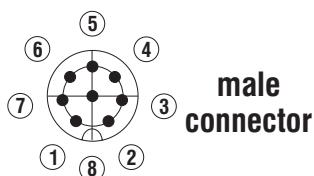
PROTECTED AREAS HEIGHT

Product Code	Protected Height HP mm	Total Height H mm	Response time ms	Number of controlled rays
OPT3-SMC-P150-0300	300	465	15	2x2
OPT3-SMC-P150-0600	600	765	18	3x3
OPT3-SMC-P150-0900	900	1065	20	4x4
OPT3-SMC-P150-1200	1200	1365	23	5x5

Safety Category	TYPE 2 - SIL 2 SILCL 2 PL d / TIPO 4* - SIL 3* SILCL 3 PL e
Power Supply	24Vdc \pm 10%
Absorption TX Unit	80 mA max
Absorption RX Unit	70 mA max
Output	2 switches SW1 - SW2 (ON/OFF) free from potential 1Adc/ac @ 40Vdc/ac
Output Protection	Short circuit and overcharge through self restoring fuses. After an overcharge or shortcircuit it is necessary to power off and wait some seconds before the normal working restart
LED Signallings	<p>TX Unit</p> <ul style="list-style-type: none"> - Yellow Led = Power Supply <p>RX Unit</p> <ul style="list-style-type: none"> - Green Led = Active Protection - Red Led = Alarm - Orange Led ON = Manual Operation - Orange Led blinking = Waiting for RESTART - Orange Led OFF = Automatic Operation <p><i>present only with the OPTION SRS/EDM</i></p>
Housing	Polished aluminium RAL1021
Housing Section	22 x 36 mm
Protection Degree	IP54 (option IP67 - IP69K)
Working Temperature	0 / +55 °C
RX Connection	Connector M12 female 8 poles shielded - lenght 10 meters
TX Connection	Connector M12 female 5 poles shielded - lenght 10 meters
Fixing	SMO (orientable support brackets)

CONNECTION ELECTRIC DIAGRAM (Standard Model)

RX



- 1) White = N.C.
- 2) Brown = + 24Vdc
- 3) Green = SW1
- 4) Yellow = SW2
- 5) Grey = SW2
- 6) Pink = SW1
- 7) Blue = -
- 8) Red = N.C.
- Shield =

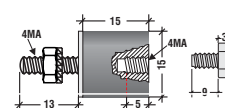
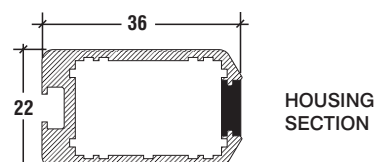
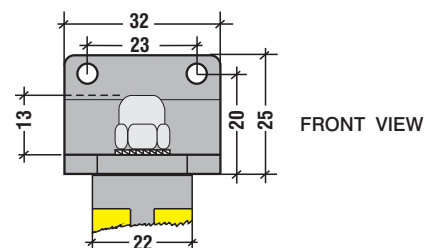
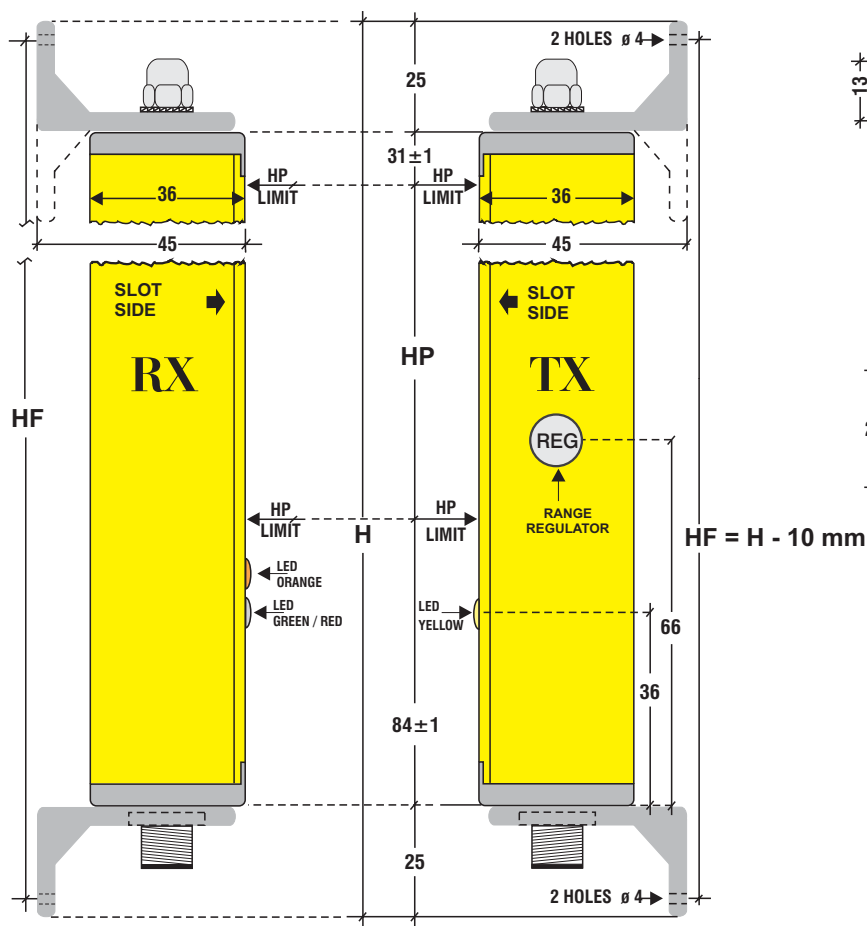
TX



- 1) Brown = + 24Vdc
- 2) White = TEST INPUT
- 3) Blue = -
- 4) Black = TEST INPUT
- 5) Grey = N.C.
- Shield =

TEST INPUT = Connect the 2 threads, white and black is simulated the interruption of the curtain test the correct opening of the outputs SW1 - SW2 of the receiving unit

SIDE VIEW



SUPPEL70 =
Elastic supports
antivibrating sliding
on all the lenght
(OPTIONS)

OPZIONI (°°)

SRS / EDM	Start Restart automatic/manual + EDM (External Device Monitoring)
OUTPUT CABLE	Output with direct cable lenght 5 meters
SUPPEL 70	Supports for the direct mounting of the profile (not orientable)
CB60 IP67	IP67 protection
CB60 IP69K	IP69K protection

ACCESSORIES

COD 5	Cable TX M12 - 5 poles shielded 10 meters included in the supply
COD 8	Cable RX M12 - 8 poles shielded 10 meters included in the supply
BOX 2/4 (*)	External control unit for TYPE 4 upgrading
BOX-MUT	External control unit for neutralization - MUTING
SPV100	Mirrors at V for enclosures
SPV100 PLUS	Mirrors at V UNBREAKABLE for enclosures

HOW TO ORDER

Product Code	Distance	Mounting	OPTIONS (°°)	Maximum Range between TX and RX
OPT3-SMC-P150-0300	-	- SMO	-	NR = HP ... 6 meters MR = 6 ... 16 meters HR = 16 ... 30 meters

Working distance in mm.

To be indicated on the order. The Light Curtain will be supplied pre-calibrated for an **immediate adjustment**

Example : OPT3 SMC-P150-0300 - 1000 - NR - SMO - SRS/EDM



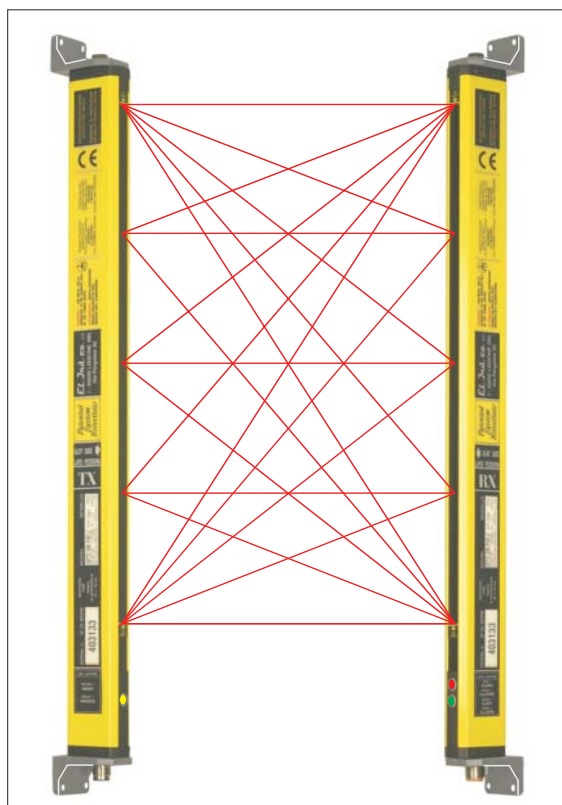
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The manufacturer has the right to modify the products and the details contained in this TECHNICAL SHEET whenever necessary without previous notification.
EL.IND.CO. is not responsible for an improper use of its products.

OPT3 SMC P160

Safety Light Curtain TYPE 2 - SIL 2 SILCL 2 PL d
Safety Light Curtain TYPE 4* - SIL 3* SILCL 3 PL e



Resolution 160 mm - body

Protected Height 320 ÷ 1920 mm

Range HP ÷ 30 meters

Output 2 switches - ON/OFF

Directives 2006/42/EC - 2004/108/EC - 2006/95/EC

Standards CEI-EN 61496/1 - CEI-CLC/TS 61496-2

Certificate N.0068/ETI - MAC/001-2010 Rev.2

Safety Light Curtain Type2 (*) with the following functions :

Start/Restart : automatic restart of the logic state of the device after an intervention and at its powering on (Standard Model)

SRS/EDM : SRS = start restart automatic /manual after an intervention and at its powering on + EDM (External Device Monitoring) choosing the option SRS/EDM

Test Input

It is supplied in series with a connector output M12 and with orientable support brackets (SMO)

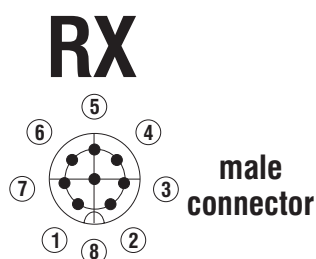
(*) Upgrading to **TYPE 4** through a control unit BOX2/4 which implements the following functions :

- **Outputs** - 2 switches 5A/250V (mobile concatenated relays)
- **EDM** (External Device Monitoring)
- **Led Diagnostic** for failures signalling and detection
- **Contact AUX (Auxiliary) NC** normally closed

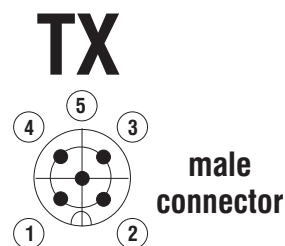
PROTECTED AREAS HEIGHT

Product Code	Protected Height HP mm	Total Height H mm	Response time ms	Number of controlled rays
OPT3-SMC-P160-0320	320	485	15	2x2
OPT3-SMC-P160-0640	640	805	18	3x3
OPT3-SMC-P160-0960	960	1125	20	4x4
OPT3-SMC-P160-1280	1280	1445	23	5x5
OPT3-SMC-P160-1600	1600	1765	25	6x6
OPT3-SMC-P160-1920	1920	2085	28	7x7

Safety Category	TYPE 2 - SIL 2 SILCL 2 PL d / TIPO 4* - SIL 3* SILCL 3 PL e
Power Supply	24Vdc \pm 10%
Absorption TX Unit	80 mA max
Absorption RX Unit	70 mA max
Output	2 switches SW1 - SW2 (ON/OFF) free from potential 1Adc/ac @ 40Vdc/ac
Output Protection	Short circuit and overcharge through self restoring fuses. After an overcharge or shortcircuit it is necessary to power off and wait some seconds before the normal working restart
LED Signallings	<p>TX Unit</p> <ul style="list-style-type: none"> - Yellow Led = Power Supply <p>RX Unit</p> <ul style="list-style-type: none"> - Green Led = Active Protection - Red Led = Alarm - Orange Led ON = Manual Operation - Orange Led blinking = Waiting for RESTART - Orange Led OFF = Automatic Operation <p><i>present only with the OPTION SRS/EDM</i></p>
Housing	Polished aluminium RAL1021
Housing Section	22 x 36 mm
Protection Degree	IP54 (option IP67 - IP69K)
Working Temperature	0 / +55 °C
RX Connection	Connector M12 female 8 poles shielded - lenght 10 meters
TX Connection	Connector M12 female 5 poles shielded - lenght 10 meters
Fixing	SMO (orientable support brackets)

CONNECTION ELECTRIC DIAGRAM (Standard Model)


- 1) White = N.C.
- 2) Brown = + 24Vdc
- 3) Green = SW1
- 4) Yellow = SW2
- 5) Grey = SW2
- 6) Pink = SW1
- 7) Blue = -
- 8) Red = N.C.
- Shield =

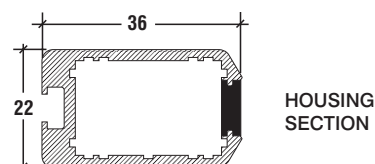
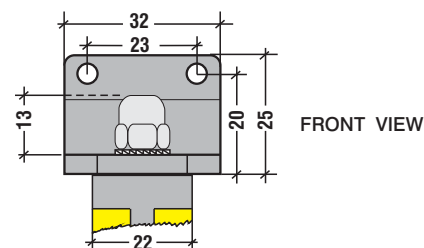


- 1) Brown = + 24Vdc
- 2) White = TEST INPUT
- 3) Blue = -
- 4) Black = TEST INPUT
- 5) Grey = N.C.
- Shield =

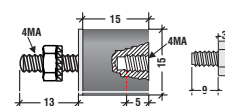
TEST INPUT = Connect the 2 threads, white and black is simulated the interruption of the curtain test the correct opening of the outputs SW1 - SW2 of the receiving unit

The drawing shows two modules, RX and TX, with the following dimensions and labels:

- Overall Dimensions:**
 - Width: 45
 - Height: 66
 - Module Thickness: 36
- Top Features:**
 - 2 HOLES $\varnothing 4$
 - HP LIMIT
 - HP
- Bottom Features:**
 - LED ORANGE
 - LED GREEN / RED
 - LED YELLOW
 - HP LIMIT
 - HP
- Internal Features:**
 - SLOT SIDE
 - RX
 - TX
 - REG
 - RANGE REGULATOR
- Other Dimensions:**
 - 31 ± 1
 - 84 ± 1
 - 25
 - 36
 - 66



$$HF = H - 10 \text{ mm}$$



SUPPEL70 =
Elastic supports
antivibrating sliding
on all the lenght
(OPTIONS)

SRS / EDM	Start Restart automatic/manual + EDM (External Device Monitoring)
OUTPUT CABLE	Output with direct cable length 5 meters
SUPPEL 70	Supports for the direct mounting of the profile (not orientable)
CB60 IP67	IP67 protection
CB60 IP69K	IP69K protection

COD 5	Cable TX M12 - 5 poles shielded 10 meters included in the supply
COD 8	Cable RX M12 - 8 poles shielded 10 meters included in the supply
BOX 2/4 (*)	External control unit for TYPE 4 upgrading
BOX-MUT	External control unit for neutralization - MUTING
SPV100	Mirrors at V for enclosures
SPV100 PLUS	Mirrors at V UNBREAKABLE for enclosures

Product Code	Distance	Mounting	OPTIONS (°)	Maximum Range between TX and RX
OPT3-SMC-P160-1920	- - - -	- SMO	- - - -	NR = HP ... 6 meters MR = 6 ... 16 meters HR = 16 ... 30 meters

To be indicated on the order. The Light Curtain will be supplied pre-calibrated for an **immediate adjustment**

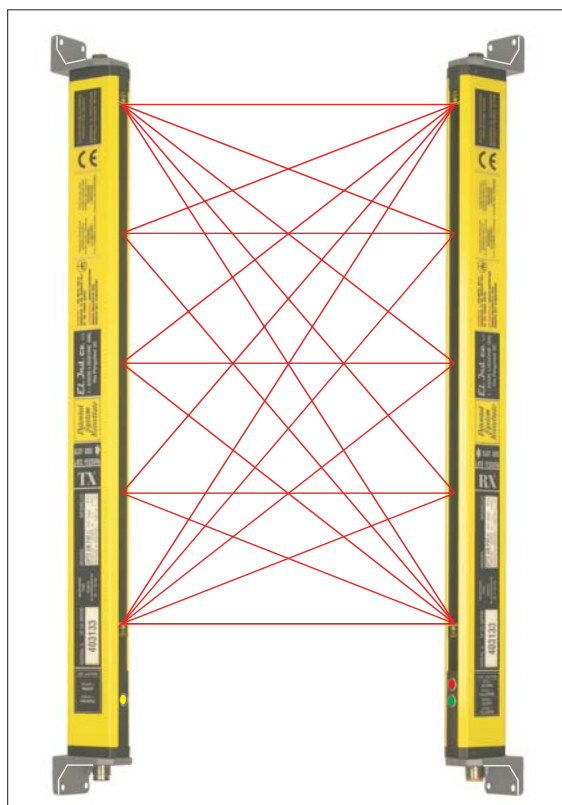
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OPT3 SMC P200

Safety Light Curtain TYPE 2 - SIL 2 SILCL 2 PL d
Safety Light Curtain TYPE 4* - SIL 3* SILCL 3 PL e



Resolution 200 mm - body

Protected Height 400 ÷ 2000 mm

Range HP ÷ 30 meters

Output 2 switches - ON/OFF

Directives 2006/42/EC - 2004/108/EC - 2006/95/EC

Standards CEI-EN 61496/1 - CEI-CLC/TS 61496-2

Certificate N.0068/ETI - MAC/001-2010 Rev.2

Safety Light Curtain Type2 (*) with the following functions :

Start/Restart : automatic restart of the logic state of the device after an intervention and at its powering on (Standard Model)

SRS/EDM : SRS = start restart automatic /manual after an intervention and at its powering on + EDM (External Device Monitoring) choosing the option SRS/EDM

Test Input

It is supplied in series with a connector output M12 and with orientable support brackets (SMO)

(*) Upgrading to **TYPE 4** through a control unit BOX2/4 which implements the following functions :

- **Outputs** - 2 switches 5A/250V (mobile concatenated relays)
- **EDM** (External Device Monitoring)
- **Led Diagnostic** for failures signalling and detection
- **Contact AUX (Auxiliary) NC** normally closed

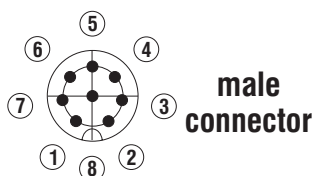
PROTECTED AREAS HEIGHT

Product Code	Protected Height HP mm	Total Height H mm	Response time ms	Number of controlled rays
OPT3-SMC-P200-0400	400	565	15	2x2
OPT3-SMC-P200-0800	800	965	18	3x3
OPT3-SMC-P200-1200	1200	1365	20	4x4
OPT3-SMC-P200-1600	1600	1765	23	5x5
OPT3-SMC-P200-2000	2000	2165	25	6x6

Safety Category	TYPE 2 - SIL 2 SILCL 2 PL d / TIPO 4* - SIL 3* SILCL 3 PL e
Power Supply	24Vdc \pm 10%
Absorption TX Unit	80 mA max
Absorption RX Unit	70 mA max
Output	2 switches SW1 - SW2 (ON/OFF) free from potential 1Adc/ac @ 40Vdc/ac
Output Protection	Short circuit and overcharge through self restoring fuses. After an overcharge or shortcircuit it is necessary to power off and wait some seconds before the normal working restart
LED Signallings	<p>TX Unit</p> <ul style="list-style-type: none"> - Yellow Led = Power Supply <p>RX Unit</p> <ul style="list-style-type: none"> - Green Led = Active Protection - Red Led = Alarm - Orange Led ON = Manual Operation - Orange Led blinking = Waiting for RESTART - Orange Led OFF = Automatic Operation <p><i>present only with the OPTION SRS/EDM</i></p>
Housing	Polished aluminium RAL1021
Housing Section	22 x 36 mm
Protection Degree	IP54 (option IP67 - IP69K)
Working Temperature	0 / +55 °C
RX Connection	Connector M12 female 8 poles shielded - lenght 10 meters
TX Connection	Connector M12 female 5 poles shielded - lenght 10 meters
Fixing	SMO (orientable support brackets)

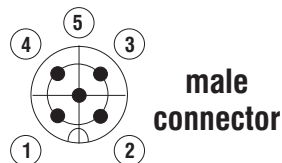
CONNECTION ELECTRIC DIAGRAM (Standard Model)

RX



- 1) White = N.C.
- 2) Brown = + 24Vdc
- 3) Green = SW1
- 4) Yellow = SW2
- 5) Grey = SW2
- 6) Pink = SW1
- 7) Blue = -
- 8) Red = N.C.
- Shield =

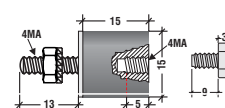
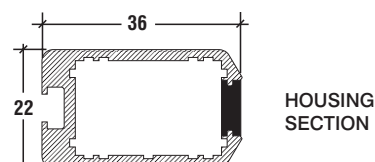
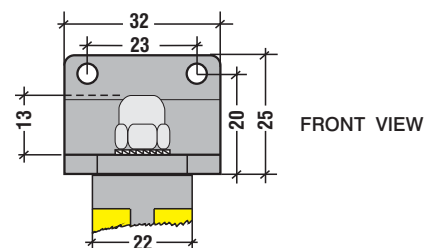
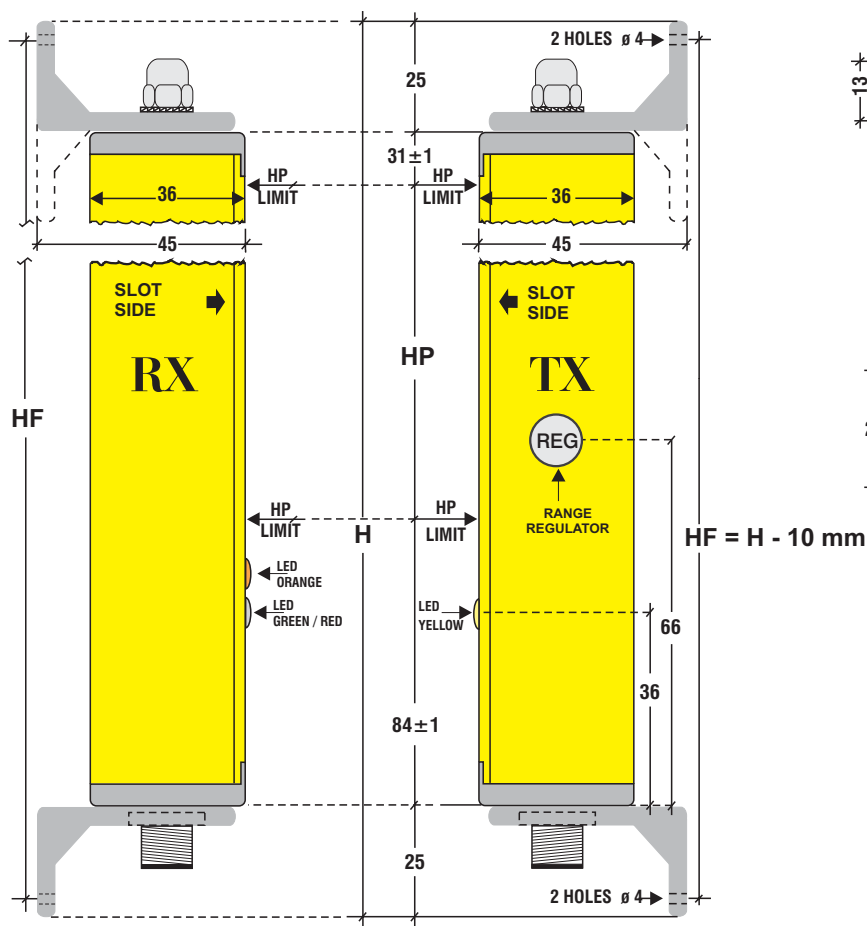
TX



- 1) Brown = + 24Vdc
- 2) White = TEST INPUT
- 3) Blue = -
- 4) Black = TEST INPUT
- 5) Grey = N.C.
- Shield =

TEST INPUT = Connect the 2 threads, white and black is simulated the interruption of the curtain test the correct opening of the outputs SW1 - SW2 of the receiving unit

SIDE VIEW



SUPPEL70 =
Elastic supports
antivibrating sliding
on all the lenght
(OPTIONS)

OPTIONS (°°)

SRS / EDM	Start Restart automatic/manual + EDM (External Device Monitoring)
OUTPUT CABLE	Output with direct cable lenght 5 meters
SUPPEL 70	Supports for the direct mounting of the profile (not orientable)
CB60 IP67	IP67 protection
CB60 IP69K	IP69K protection

ACCESSORIES

COD 5	Cable TX M12 - 5 poles shielded 10 meters included in the supply
COD 8	Cable RX M12 - 8 poles shielded 10 meters included in the supply
BOX 2/4 (*)	External control unit for TYPE 4 upgrading
BOX-MUT	External control unit for neutralization - MUTING
SPV100	Mirrors at V for enclosures
SPV100 PLUS	Mirrors at V UNBREAKABLE for enclosures

HOW TO ORDER

Product Code	Distance	Mounting	OPTIONS (°°)	Maximum Range between TX and RX
OPT3-SMC-P200-0800	-	- SMO	-	NR = HP ... 6 meters MR = 6 ... 16 meters HR = 16 ... 30 meters

Working distance in mm.

To be indicated on the order. The Light Curtain will be supplied pre-calibrated for an **immediate adjustment**

Example : OPT3 SMC-P200-0800 - 1000 - NR - SMO - SRS/EDM

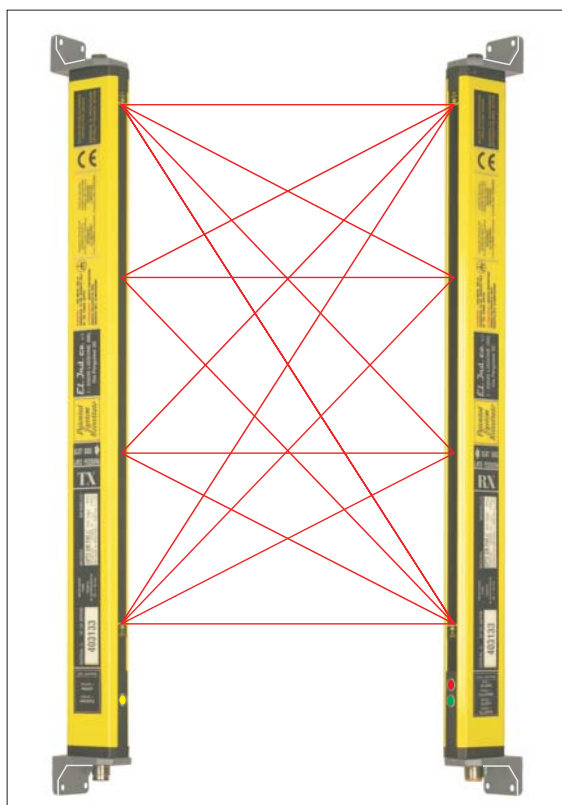


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OPT3 SMC P240

Safety Light Curtain TYPE 2 - SIL 2 SILCL 2 PL d
Safety Light Curtain TYPE 4* - SIL 3* SILCL 3 PL e



Resolution 240 mm - body

Protected Height 480 ÷ 1920 mm

Range HP ÷ 30 meters

Output 2 switches - ON/OFF

Directives 2006/42/EC - 2004/108/EC - 2006/95/EC

Standards CEI-EN 61496/1 - CEI-CLC/TS 61496-2

Certificate N.0068/ETI - MAC/001-2010 Rev.2

Safety Light Curtain Type2 (*) with the following functions :

Start/Restart : automatic restart of the logic state of the device after an intervention and at its powering on (Standard Model)

SRS/EDM : SRS = start restart automatic /manual after an intervention and at its powering on + EDM (External Device Monitoring) choosing the option SRS/EDM

Test Input

It is supplied in series with a connector output M12 and with orientable support brackets (SMO)

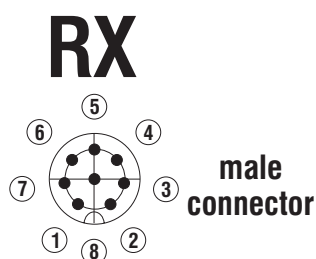
(*) Upgrading to **TYPE 4** through a control unit BOX2/4 which implements the following functions :

- **Outputs** - 2 switches 5A/250V (mobile concatenated relays)
- **EDM** (External Device Monitoring)
- **Led Diagnostic** for failures signalling and detection
- **Contact AUX (Auxiliary) NC** normally closed

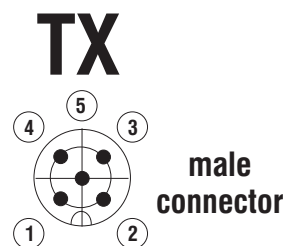
PROTECTED AREAS HEIGHT

Product Code	Protected Height HP mm	Total Height H mm	Response time ms	Number of controlled rays
OPT3-SMC-P240-0480	480	645	15	2x2
OPT3-SMC-P240-0960	960	1125	18	3x3
OPT3-SMC-P240-1440	1440	1605	20	4x4
OPT3-SMC-P240-1920	1920	2085	23	5x5

Safety Category	TYPE 2 - SIL 2 SILCL 2 PL d / TIPO 4* - SIL 3* SILCL 3 PL e
Power Supply	24Vdc \pm 10%
Absorption TX Unit	80 mA max
Absorption RX Unit	70 mA max
Output	2 switches SW1 - SW2 (ON/OFF) free from potential 1Adc/ac @ 40Vdc/ac
Output Protection	Short circuit and overcharge through self restoring fuses. After an overcharge or shortcircuit it is necessary to power off and wait some seconds before the normal working restart
LED Signallings	<p>TX Unit</p> <ul style="list-style-type: none"> - Yellow Led = Power Supply <p>RX Unit</p> <ul style="list-style-type: none"> - Green Led = Active Protection - Red Led = Alarm - Orange Led ON = Manual Operation - Orange Led blinking = Waiting for RESTART - Orange Led OFF = Automatic Operation <p><i>present only with the OPTION SRS/EDM</i></p>
Housing	Polished aluminium RAL1021
Housing Section	22 x 36 mm
Protection Degree	IP54 (option IP67 - IP69K)
Working Temperature	0 / +55 °C
RX Connection	Connector M12 female 8 poles shielded - lenght 10 meters
TX Connection	Connector M12 female 5 poles shielded - lenght 10 meters
Fixing	SMO (orientable support brackets)

CONNECTION ELECTRIC DIAGRAM (Standard Model)


- 1) White = N.C.
- 2) Brown = + 24Vdc
- 3) Green = SW1
- 4) Yellow = SW2
- 5) Grey = SW2
- 6) Pink = SW1
- 7) Blue = -
- 8) Red = N.C.
- Shield =



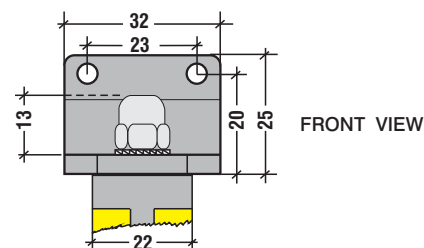
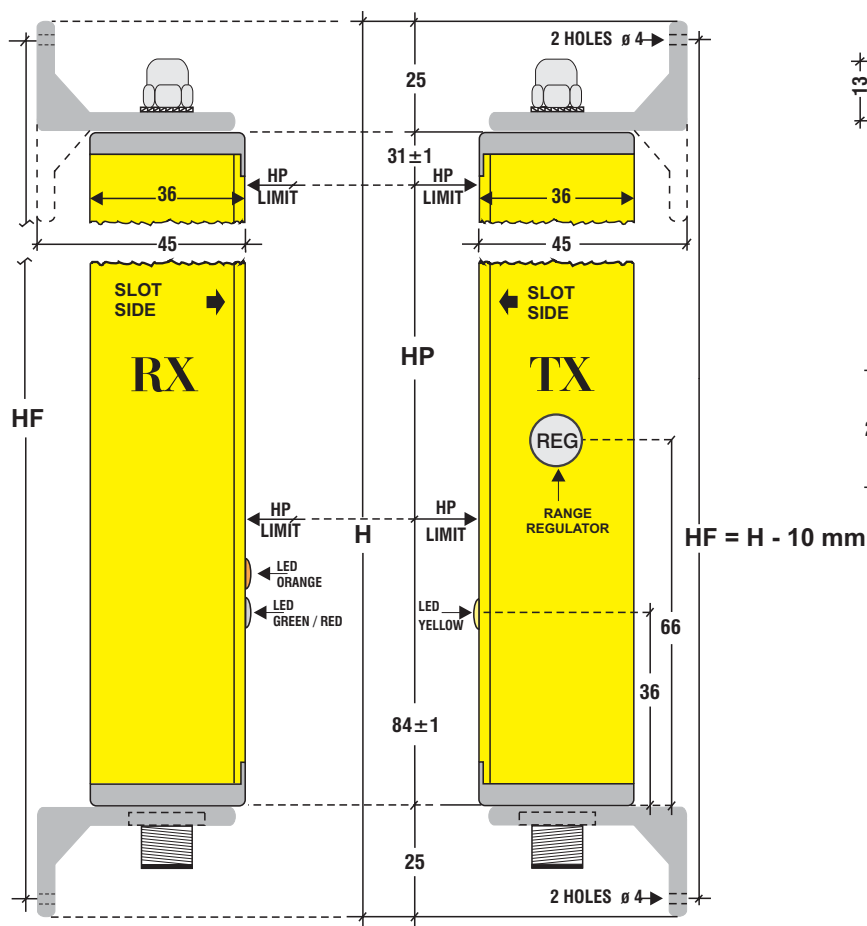
- 1) Brown = + 24Vdc
- 2) White = TEST INPUT
- 3) Blue = -
- 4) Black = TEST INPUT
- 5) Grey = N.C.
- Shield =

TEST INPUT = Connect the 2 threads, white and black is simulated the interruption of the curtain test the correct opening of the outputs SW1 - SW2 of the receiving unit

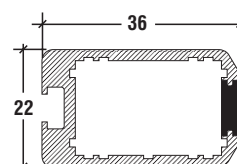
⁽¹⁾Leave close if not used

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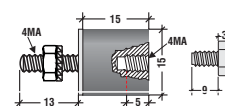
SIDE VIEW



FRONT VIEW



HOUSING SECTION



SUPPEL70 = Elastic supports antivibrating sliding on all the lenght (OPTIONS)

OPTIONS (°°)

SRS / EDM	Start Restart automatic/manual + EDM (External Device Monitoring)
OUTPUT CABLE	Output with direct cable lenght 5 meters
SUPPEL 70	Supports for the direct mounting of the profile (not orientable)
CB60 IP67	IP67 protection
CB60 IP69K	IP69K protection

ACCESSORIES

COD 5	Cable TX M12 - 5 poles shielded 10 meters included in the supply
COD 8	Cable RX M12 - 8 poles shielded 10 meters included in the supply
BOX 2/4 (*)	External control unit for TYPE 4 upgrading
BOX-MUT	External control unit for neutralization - MUTING
SPV100	Mirrors at V for enclosures
SPV100 PLUS	Mirrors at V UNBREAKABLE for enclosures

HOW TO ORDER

Product Code	Distance	Mounting	OPTIONS (°°)	Maximum Range between TX and RX
OPT3-SMC-P240-0480	-	- SMO	-	NR = HP ... 6 meters MR = 6 ... 16 meters HR = 16 ... 30 meters

Working distance in mm.

To be indicated on the order. The Light Curtain will be supplied pre-calibrated for an **immediate adjustment**

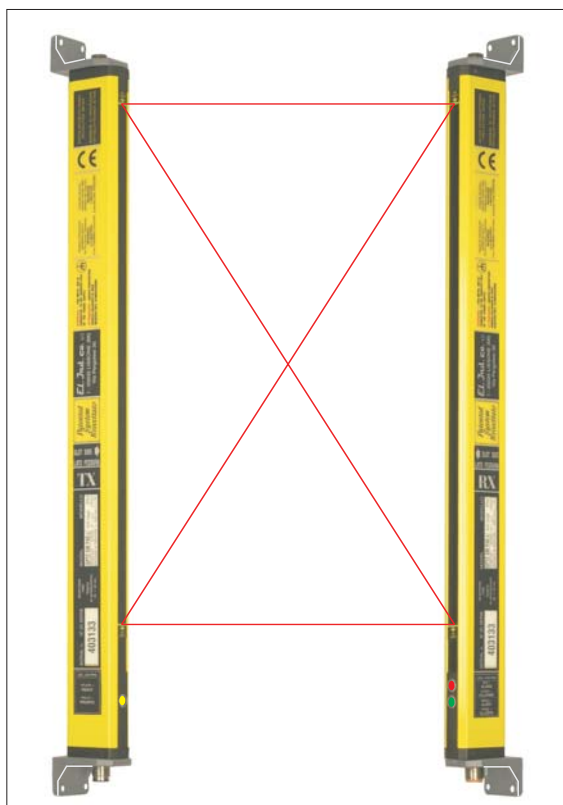
Example : OPT3 SMC-P240-0480 - 1000 - NR - SMO - SRS/EDM

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OPT3 SMC P280

Safety Light Curtain TYPE 2 - SIL 2 SILCL 2 PL d
Safety Light Curtain TYPE 4* - SIL 3* SILCL 3 PL e



Resolution 280 mm - access

Protected Height 560 ÷ 1680 mm

Range HP ÷ 30 meters

Output 2 switches - ON/OFF

Directives 2006/42/EC - 2004/108/EC - 2006/95/EC

Standards CEI-EN 61496/1 - CEI-CLC/TS 61496-2

Certificate N.0068/ETI - MAC/001-2010 Rev.2

Safety Light Curtain Type2 (*) with the following functions :

Start/Restart : automatic restart of the logic state of the device after an intervention and at its powering on (Standard Model)

SRS/EDM : SRS = start restart automatic /manual after an intervention and at its powering on + EDM (External Device Monitoring) choosing the option SRS/EDM

Test Input

It is supplied in series with a connector output M12 and with orientable support brackets (SMO)

(*) Upgrading to **TYPE 4** through a control unit BOX2/4 which implements the following functions :

- **Outputs** - 2 switches 5A/250V (mobile concatenated relays)
- **EDM** (External Device Monitoring)
- **Led Diagnostic** for failures signalling and detection
- **Contact AUX (Auxiliary) NC** normally closed

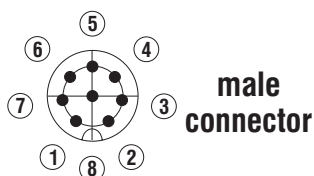
PROTECTED AREAS HEIGHT

Product Code	Protected Height HP mm	Total Height H mm	Response time ms	Number of controlled rays
OPT3-SMC-P280-0560	560	725	15	2x2
OPT3-SMC-P280-1120	1120	1285	18	3x3
OPT3-SMC-P280-1680	1680	1845	20	4x4

Safety Category	TYPE 2 - SIL 2 SILCL 2 PL d / TIPO 4* - SIL 3* SILCL 3 PL e
Power Supply	24Vdc \pm 10%
Absorption TX Unit	80 mA max
Absorption RX Unit	70 mA max
Output	2 switches SW1 - SW2 (ON/OFF) free from potential 1Adc/ac @ 40Vdc/ac
Output Protection	Short circuit and overcharge through self restoring fuses. After an overcharge or shortcircuit it is necessary to power off and wait some seconds before the normal working restart
LED Signallings	<p>TX Unit</p> <ul style="list-style-type: none"> - Yellow Led = Power Supply <p>RX Unit</p> <ul style="list-style-type: none"> - Green Led = Active Protection - Red Led = Alarm - Orange Led ON = Manual Operation - Orange Led blinking = Waiting for RESTART - Orange Led OFF = Automatic Operation <p><i>present only with the OPTION SRS/EDM</i></p>
Housing	Polished aluminium RAL1021
Housing Section	22 x 36 mm
Protection Degree	IP54 (option IP67 - IP69K)
Working Temperature	0 / +55 °C
RX Connection	Connector M12 female 8 poles shielded - lenght 10 meters
TX Connection	Connector M12 female 5 poles shielded - lenght 10 meters
Fixing	SMO (orientable support brackets)

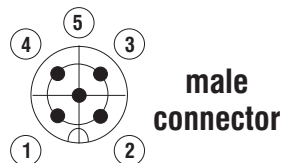
CONNECTION ELECTRIC DIAGRAM (Standard Model)

RX



- 1) White = N.C.
- 2) Brown = + 24Vdc
- 3) Green = SW1
- 4) Yellow = SW2
- 5) Grey = SW2
- 6) Pink = SW1
- 7) Blue = -
- 8) Red = N.C.
- Shield =

TX

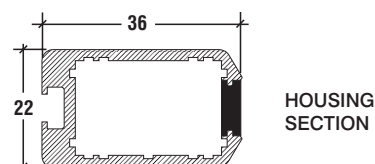
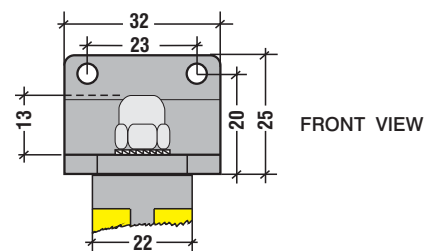
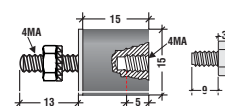


- 1) Brown = + 24Vdc
- 2) White = TEST INPUT
- 3) Blue = -
- 4) Black = TEST INPUT
- 5) Grey = N.C.
- Shield =

TEST INPUT = Connect the 2 threads, white and black is simulated the interruption of the curtain test the correct opening of the outputs SW1 - SW2 of the receiving unit

The drawing shows two modules, RX and TX, with the following dimensions and labels:

- Overall Width:** 45
- Module Width:** 36
- Top Mounting:** 2 HOLES $\varnothing 4$
- HP LIMIT:** Indicated on both sides of the module width.
- Module Height:** 66
- Module Label:** RX
- Slot Label:** SLOT SIDE
- LED Indicators:** LED ORANGE, LED GREEN / RED
- Bottom Mounting:** 2 HOLES $\varnothing 4$
- Overall Height:** 84 ± 1
- Module Label:** TX
- Slot Label:** SLOT SIDE
- REG:** RANGE REGULATOR
- LED Indicator:** LED YELLOW


$$HF = H - 10 \text{ mm}$$


SUPPEL70 =
Elastic supports
antivibrating sliding
on all the lenght
(OPTIONS)

SRS / EDM	Start Restart automatic/manual + EDM (External Device Monitoring)
OUTPUT CABLE	Output with direct cable length 5 meters
SUPPEL 70	Supports for the direct mounting of the profile (not orientable)
CB60 IP67	IP67 protection
CB60 IP69K	IP69K protection

COD 5	Cable TX M12 - 5 poles shielded 10 meters included in the supply
COD 8	Cable RX M12 - 8 poles shielded 10 meters included in the supply
BOX 2/4 (*)	External control unit for TYPE 4 upgrading
BOX-MUT	External control unit for neutralization - MUTING
SPV100	Mirrors at V for enclosures
SPV100 PLUS	Mirrors at V UNBREAKABLE for enclosures

Product Code	Distance	Mounting	OPTIONS (°)	Maximum Range between TX and RX
OPT3-SMC-P280-0560	- - - -	- SMO	- - - -	NR = HP ... 6 meters MR = 6 ... 16 meters HR = 16 ... 30 meters

To be indicated on the order. The Light Curtain will be supplied pre-calibrated for an **immediate adjustment**

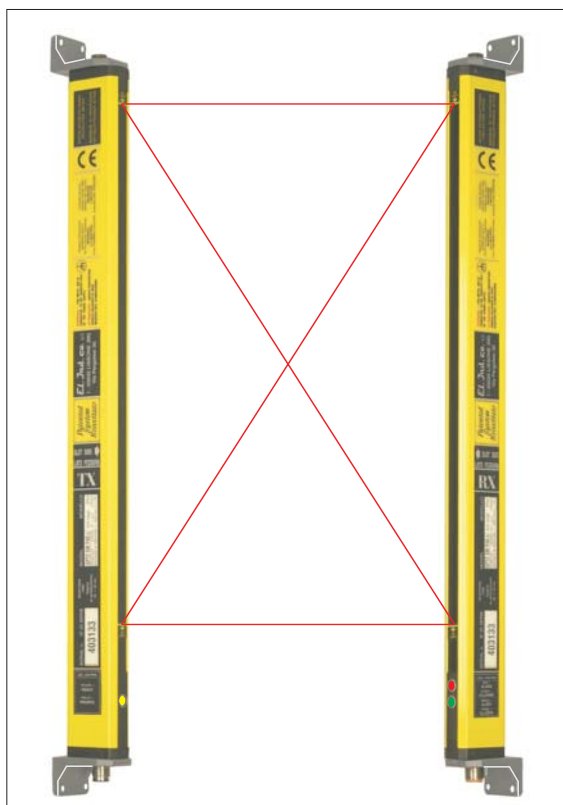
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OPT3 SMC P320

Safety Light Curtain TYPE 2 - SIL 2 SILCL 2 PL d
Safety Light Curtain TYPE 4* - SIL 3* SILCL 3 PL e



Detection 320 mm - body

Protected Height 640 ÷ 1920 mm

Range HP ÷ 30 meters

Output 2 switches - ON/OFF

Directives 2006/42/EC - 2004/108/EC - 2006/95/EC

Standards CEI-EN 61496/1 - CEI-CLC/TS 61496-2

Certificate N.0068/ETI - MAC/001-2010 Rev.2

Safety Light Curtain Type2 (*) with the following functions :

Start/Restart : automatic restart of the logic state of the device after an intervention and at its powering on (Standard Model)

SRS/EDM : SRS = start restart automatic /manual after an intervention and at its powering on + EDM (External Device Monitoring) choosing the option SRS/EDM

Test Input

It is supplied in series with a connector output M12 and with orientable support brackets (SMO)

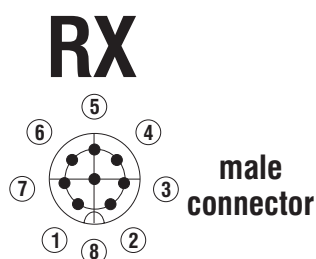
(*) Upgrading to **TYPE 4** through a control unit BOX2/4 which implements the following functions :

- **Outputs** - 2 switches 5A/250V (mobile concatenated relays)
- **EDM** (External Device Monitoring)
- **Led Diagnostic** for failures signalling and detection
- **Contact AUX (Auxiliary) NC** normally closed

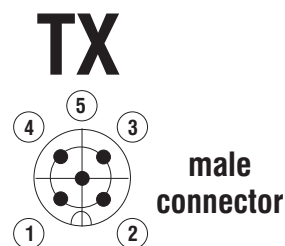
PROTECTED AREAS HEIGHT

Product Code	Protected Height HP mm	Total Height H mm	Response time ms	Number of controlled rays
OPT3-SMC-P320-0640	640	805	15	2x2
OPT3-SMC-P320-1280	1280	1445	18	3x3
OPT3-SMC-P320-1920	1920	2085	20	4x4

Safety Category	TYPE 2 - SIL 2 SILCL 2 PL d / TIPO 4* - SIL 3* SILCL 3 PL e
Power Supply	24Vdc \pm 10%
Absorption TX Unit	80 mA max
Absorption RX Unit	70 mA max
Output	2 switches SW1 - SW2 (ON/OFF) free from potential 1Adc/ac @ 40Vdc/ac
Output Protection	Short circuit and overcharge through self restoring fuses. After an overcharge or shortcircuit it is necessary to power off and wait some seconds before the normal working restart
LED Signallings	TX Unit - Yellow Led = Power Supply RX Unit - Green Led = Active Protection - Red Led = Alarm - Orange Led ON = Manual Operation - Orange Led blinking = Waiting for RESTART - Orange Led OFF = Automatic Operation <div style="display: inline-block; vertical-align: middle; font-size: 0.8em; margin-left: 10px;"> } present only with the OPTION SRS/EDM </div>
Housing	Polished aluminium RAL1021
Housing Section	22 x 36 mm
Protection Degree	IP54 (option IP67 - IP69K)
Working Temperature	0 / +55 °C
RX Connection	Connector M12 female 8 poles shielded - lenght 10 meters
TX Connection	Connector M12 female 5 poles shielded - lenght 10 meters
Fixing	SMO (orientable support brackets)

CONNECTION ELECTRIC DIAGRAM (Standard Model)


- 1) White = N.C.
- 2) Brown = + 24Vdc
- 3) Green = SW1
- 4) Yellow = SW2
- 5) Grey =
- 6) Pink =
- 7) Blue =
- 8) Red = N.C.
- Shield =



- 1) Brown = + 24Vdc
- 2) White = TEST INPUT
- 3) Blue =
- 4) Black = TEST INPUT
- 5) Grey = N.C.
- Shield =

TEST INPUT = Connect the 2 threads, white and black is simulated the interruption of the curtain test the correct opening of the outputs SW1 - SW2 of the receiving unit

RX

Manual Operation

- SRS/EDM = White
 + 24Vdc = Brown
 SW1 = Green
 SW2 = Yellow
 = Grey
 = Pink
 - = Blue
 MODE = Red
 = Shield

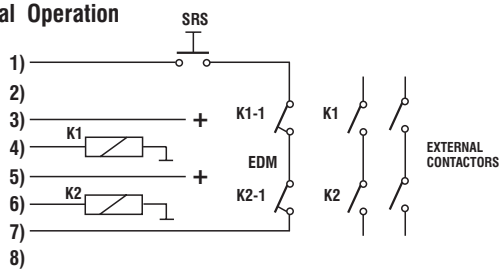


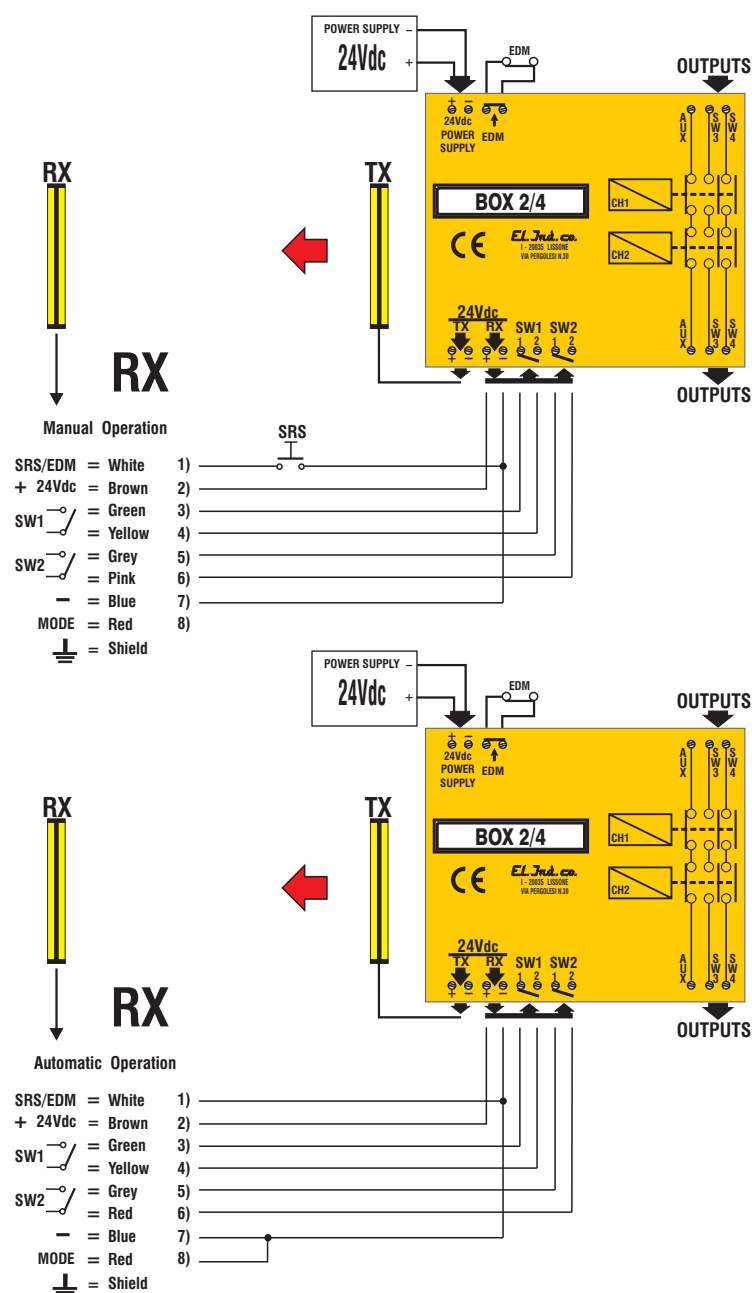
Table Operative Mode

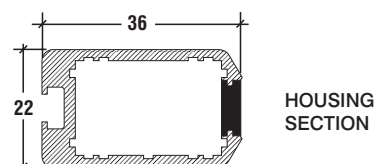
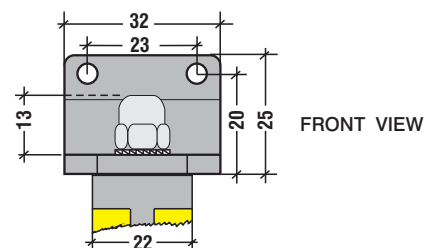
	RED	WHITE ⁽¹⁾	
	MODE	SRS	EDM
AUTOMATIC	0 Volt	X	✓/X
MANUAL	NC	✓	✓/X

⁽¹⁾Leave close if not used

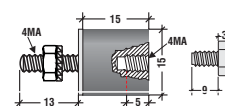
To connect the TX refer to the diagram on page 2

CONNECTION ELECTRIC DIAGRAM (model Type 4 with option SRS/EDM)



[illegible]

$$HF = H - 10 \text{ mm}$$



SUPPEL70 =
Elastic supports
antivibrating sliding
on all the lenght
(OPTIONS)

SRS / EDM	Start Restart automatic/manual + EDM (External Device Monitoring)
OUTPUT CABLE	Output with direct cable length 5 meters
SUPPEL 70	Supports for the direct mounting of the profile (not orientable)
CB60 IP67	IP67 protection
CB60 IP69K	IP69K protection

COD 5	Cable TX M12 - 5 poles shielded 10 meters included in the supply
COD 8	Cable RX M12 - 8 poles shielded 10 meters included in the supply
BOX 2/4 (*)	External control unit for TYPE 4 upgrading
BOX-MUT	External control unit for neutralization - MUTING
SPV100	Mirrors at V for enclosures
SPV100 PLUS	Mirrors at V UNBREAKABLE for enclosures

Product Code	Distance	Mounting	OPTIONS (°°)	Maximum Range between TX and RX
OPT3-SMC-P320-0640	- - - -	- SMO	- - - -	NR = HP ... 6 meters MR = 6 ... 16 meters HR = 16 ... 30 meters

To be indicated on the order. The Light Curtain will be supplied pre-calibrated for an **immediate adjustment**

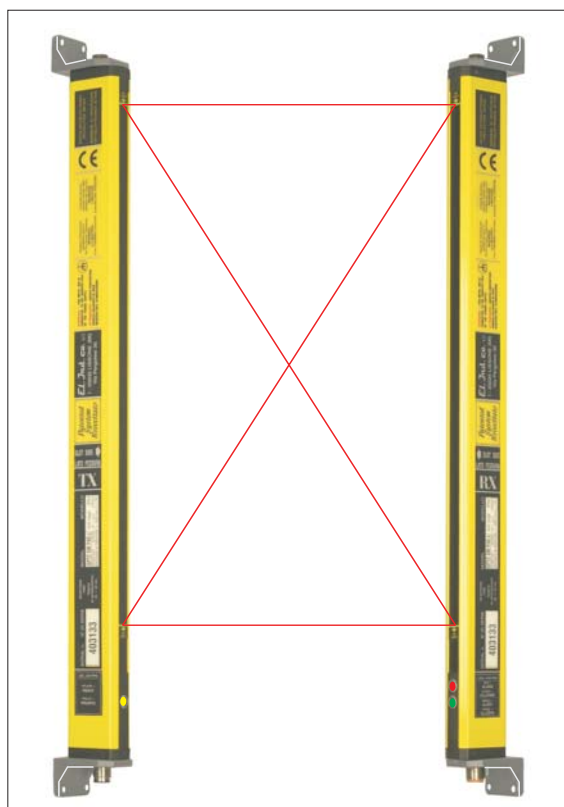
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OPT3 SMC P360

Safety Light Curtain TYPE 2 - SIL 2 SILCL 2 PL d
Safety Light Curtain TYPE 4* - SIL 3* SILCL 3 PL e



Resolution 360 mm - body

Protected Height 720 ÷ 1440 mm

Range HP ÷ 30 meters

Output 2 switches - ON/OFF

Directives 2006/42/EC - 2004/108/EC - 2006/95/EC

Standards CEI-EN 61496/1 - CEI-CLC/TS 61496-2

Certificate N.0068/ETI - MAC/001-2010 Rev.2

Safety Light Curtain Type 2 (*) with the following functions :

Start/Restart : automatic restart of the logic state of the device after an intervention and at its powering on (Standard Model)

SRS/EDM : SRS = start restart automatic /manual after an intervention and at its powering on + EDM (External Device Monitoring) choosing the option SRS/EDM

Test Input

It is supplied in series with a connector output M12 and with orientable support brackets (SMO)

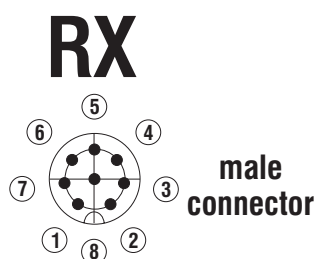
(*) Upgrading to **TYPE 4** through a control unit BOX2/4 which implements the following functions :

- **Outputs** - 2 switches 5A/250V (mobile concatenated relays) - **Led Diagnostic** for failures signalling and detection
- **EDM** (External Device Monitoring) - **Contact AUX (Auxiliary) NC** normally closed

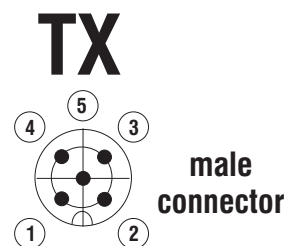
PROTECTED AREAS HEIGHT

Product Code	Protected Height HP mm	Total Height H mm	Response time ms	Number of controlled rays
OPT3-SMC-P360-0720	720	885	15	2x2
OPT3-SMC-P360-1440	1440	1605	18	3x3

Safety Category	TYPE 2 - SIL 2 SILCL 2 PL d / TIPO 4* - SIL 3* SILCL 3 PL e
Power Supply	24Vdc \pm 10%
Absorption TX Unit	80 mA max
Absorption RX Unit	70 mA max
Output	2 switches SW1 - SW2 (ON/OFF) free from potential 1Adc/ac @ 40Vdc/ac
Output Protection	Short circuit and overcharge through self restoring fuses. After an overcharge or shortcircuit it is necessary to power off and wait some seconds before the normal working restart
LED Signallings	TX Unit - Yellow Led = Power Supply RX Unit - Green Led = Active Protection - Red Led = Alarm - Orange Led ON = Manual Operation - Orange Led blinking = Waiting for RESTART - Orange Led OFF = Automatic Operation <div style="display: inline-block; vertical-align: middle; font-size: 0.8em; margin-left: 10px;"> } present only with the OPTION SRS/EDM </div>
Housing	Polished aluminium RAL1021
Housing Section	22 x 36 mm
Protection Degree	IP54 (option IP67 - IP69K)
Working Temperature	0 / +55 °C
RX Connection	Connector M12 female 8 poles shielded - lenght 10 meters
TX Connection	Connector M12 female 5 poles shielded - lenght 10 meters
Fixing	SMO (orientable support brackets)

CONNECTION ELECTRIC DIAGRAM (Standard Model)


- 1) White = N.C.
- 2) Brown = + 24Vdc
- 3) Green = SW1
- 4) Yellow = SW2
- 5) Grey =
- 6) Pink =
- 7) Blue =
- 8) Red = N.C.
- Shield =



- 1) Brown = + 24Vdc
- 2) White = TEST INPUT
- 3) Blue =
- 4) Black = TEST INPUT
- 5) Grey = N.C.
- Shield =

TEST INPUT = Connect the 2 threads, white and black is simulated the interruption of the curtain test the correct opening of the outputs SW1 - SW2 of the receiving unit

RX

Manual Operation

SRS/EDM = White
 + 24Vdc = Brown
 SW1 = Green
 SW2 = Yellow
 = Grey
 = Pink
 - = Blue
 MODE = Red
 = Shield

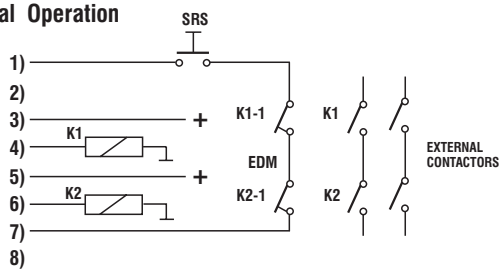


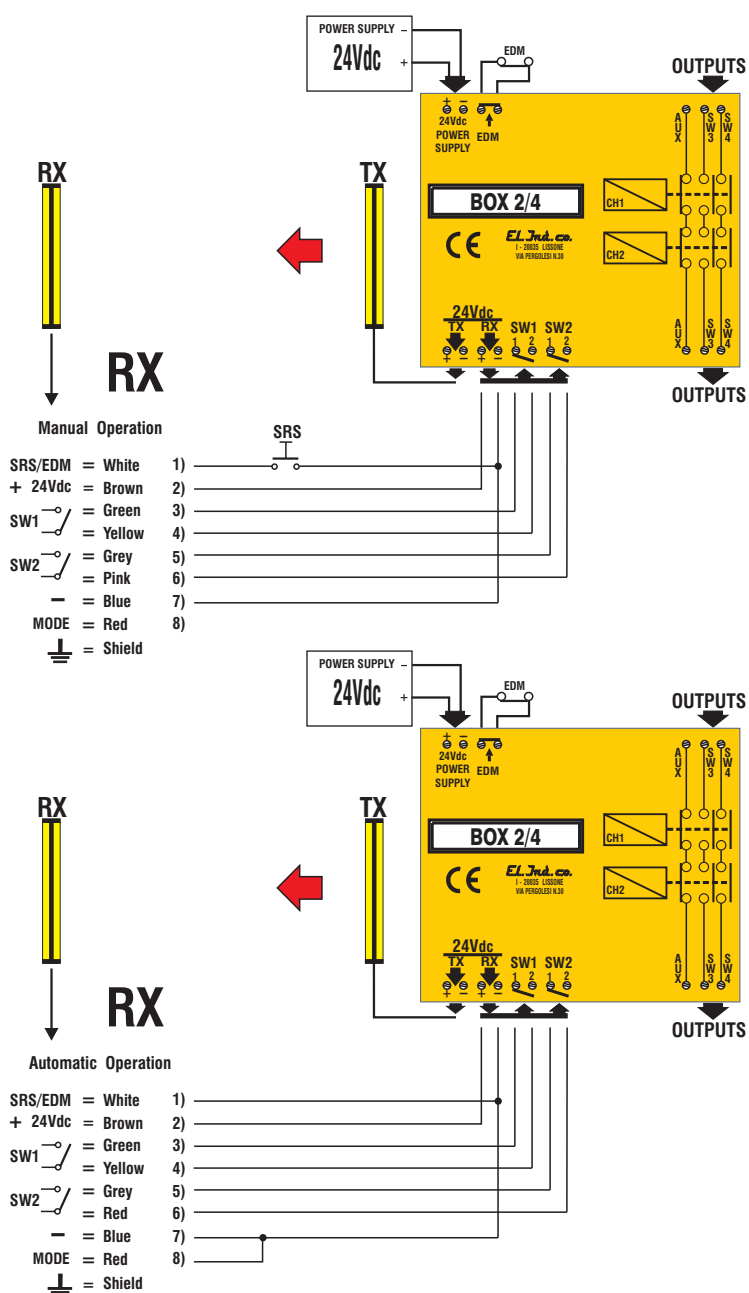
Table Operative Mode

	RED	WHITE ⁽¹⁾	
	MODE	SRS	EDM
AUTOMATIC	0 Volt	X	✓/X
MANUAL	NC	✓	✓/X

⁽¹⁾Leave close if not used

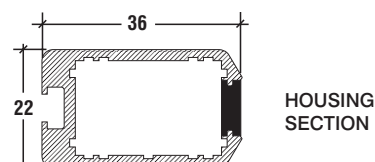
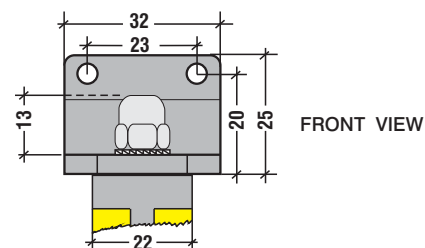
To connect the TX refer to the diagram on page 2

CONNECTION ELECTRIC DIAGRAM (model Type 4 with option SRS/EDM)

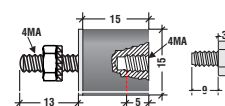


The drawing shows two modules, RX and TX, with the following dimensions and labels:

- Overall Dimensions:**
 - Top width: 25
 - Bottom width: 25
 - Top hole spacing: 2 HOLES $\varnothing 4$
 - Bottom hole spacing: 2 HOLES $\varnothing 4$
 - Module width: 45
 - Module height: 84 ± 1
 - Slot width: 36
 - Slot height: 36
 - LED height: 66
 - LED spacing: 36
 - Overall height: H
 - Overall height minus 10 mm: HF = H - 10 mm
- Labels and Features:**
 - RX Module:**
 - SLOT SIDE (with arrow pointing right)
 - RX
 - LED ORANGE
 - LED GREEN / RED
 - TX Module:**
 - SLOT SIDE (with arrow pointing left)
 - TX
 - REG (Range Regulator)
 - RANGE REGULATOR
 - LED YELLOW
- Limit and Tolerance Indicators:**
 - HP LIMIT (Horizontal Position Limit)
 - 31 ± 1 (Horizontal distance between slot centers)



$$HF = H - 10 \text{ mm}$$



SUPPEL70 =
Elastic supports
antivibrating sliding
on all the lenght
(OPTIONS)

SRS / EDM	Start Restart automatic/manual + EDM (External Device Monitoring)
OUTPUT CABLE	Output with direct cable lenght 5 meters
SUPPEL 70	Supports for the direct mounting of the profile (not orientable)
CB60 IP67	IP67 protection
CB60 IP69K	IP69K protection

COD 5	Cable TX M12 - 5 poles shielded 10 meters included in the supply
COD 8	Cable RX M12 - 8 poles shielded 10 meters included in the supply
BOX 2/4 (*)	External control unit for TYPE 4 upgrading
BOX-MUT	External control unit for neutralization - MUTING
SPV100	Mirrors at V for enclosures
SPV100 PLUS	Mirrors at V UNBREAKABLE for enclosures

Product Code	Distance	Mounting	OPTIONS (°°)	Maximum Range between TX and RX
OPT3-SMC-P360-0720 - - - -	-	SMO -	- - - -	NR = HP ... 6 meters MR = 6 ... 16 meters HR = 16 ... 30 meters

To be indicated on the order. The Light Curtain will be supplied pre-calibrated for an **immediate adjustment**

Example : OPT3 SMC-P360-0720 - 1000 - NR - SMO - SRS/EDM



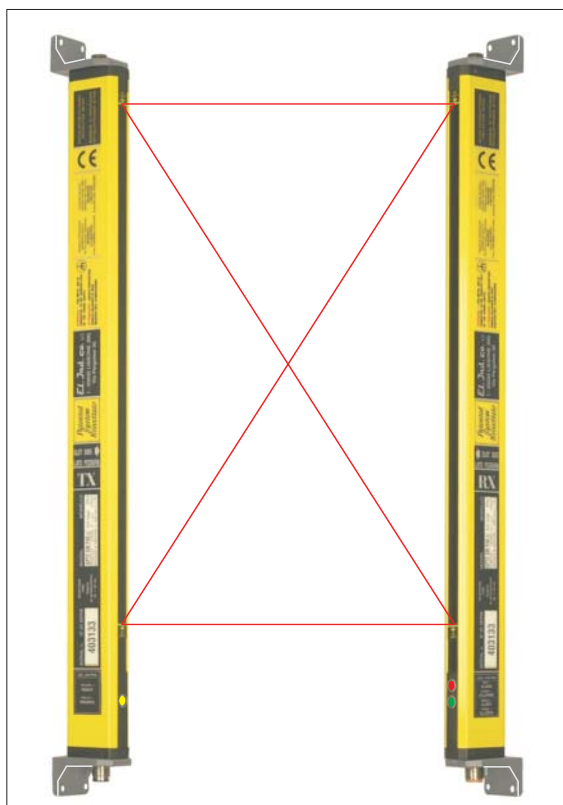
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OPT3 SMC P400

Safety Light Curtain TYPE 2 - SIL 2 SILCL 2 PL d
Safety Light Curtain TYPE 4* - SIL 3* SILCL 3 PL e



Resolution 400 mm - body

Protected Height 800 ÷ 1600 mm

Range HP ÷ 30 meters

Output 2 switches - ON/OFF

Directives 2006/42/EC - 2004/108/EC - 2006/95/EC

Standards CEI-EN 61496/1 - CEI-CLC/TS 61496-2

Certificate N.0068/ETI - MAC/001-2010 Rev.2

Safety Light Curtain Type2 (*) with the following functions :

Start/Restart : automatic restart of the logic state of the device after an intervention and at its powering on (Standard Model)

SRS/EDM : SRS = start restart automatic /manual after an intervention and at its powering on + EDM (External Device Monitoring) choosing the option SRS/EDM

Test Input

It is supplied in series with a connector output M12 and with orientable support brackets (SMO)

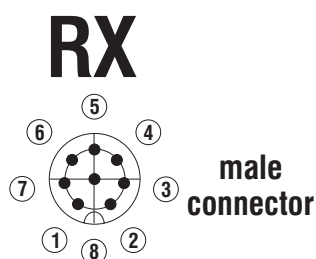
(*) Upgrading to **TYPE 4** through a control unit BOX2/4 which implements the following functions :

- **Outputs** - 2 switches 5A/250V (mobile concatenated relays) - **Led Diagnostic** for failures signalling and detection
- **EDM** (External Device Monitoring) - **Contact AUX (Auxiliary) NC** normally closed

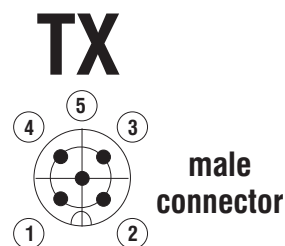
PROTECTED AREAS HEIGHT

Product Code	Protected Height HP mm	Total Height H mm	Response time ms	Number of controlled rays
OPT3-SMC-P400-0800	800	965	15	2x2
OPT3-SMC-P400-1600	1600	1765	18	3x3

Safety Category	TYPE 2 - SIL 2 SILCL 2 PL d / TIPO 4* - SIL 3* SILCL 3 PL e
Power Supply	24Vdc \pm 10%
Absorption TX Unit	80 mA max
Absorption RX Unit	70 mA max
Output	2 switches SW1 - SW2 (ON/OFF) free from potential 1Adc/ac @ 40Vdc/ac
Output Protection	Short circuit and overcharge through self restoring fuses. After an overcharge or shortcircuit it is necessary to power off and wait some seconds before the normal working restart
LED Signallings	TX Unit - Yellow Led = Power Supply RX Unit - Green Led = Active Protection - Red Led = Alarm - Orange Led ON = Manual Operation - Orange Led blinking = Waiting for RESTART - Orange Led OFF = Automatic Operation <div style="display: inline-block; vertical-align: middle; font-size: 0.8em; margin-left: 10px;"> } present only with the OPTION SRS/EDM </div>
Housing	Polished aluminium RAL1021
Housing Section	22 x 36 mm
Protection Degree	IP54 (option IP67 - IP69K)
Working Temperature	0 / +55 °C
RX Connection	Connector M12 female 8 poles shielded - lenght 10 meters
TX Connection	Connector M12 female 5 poles shielded - lenght 10 meters
Fixing	SMO (orientable support brackets)

CONNECTION ELECTRIC DIAGRAM (Standard Model)


- 1) White = N.C.
- 2) Brown = + 24Vdc
- 3) Green = SW1
- 4) Yellow = SW2
- 5) Grey =
- 6) Pink =
- 7) Blue = —
- 8) Red = N.C.
- Shield =



- 1) Brown = + 24Vdc
- 2) White = TEST INPUT
- 3) Blue = —
- 4) Black = TEST INPUT
- 5) Grey = N.C.
- Shield =

TEST INPUT = Connect the 2 threads, white and black is simulated the interruption of the curtain test the correct opening of the outputs SW1 - SW2 of the receiving unit

Manual Operation



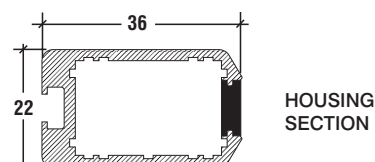
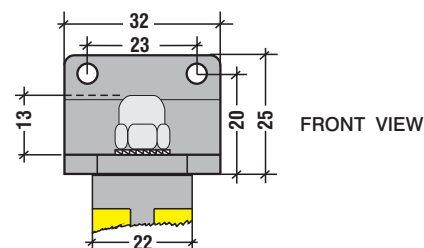
⁽¹⁾Leave close if not used

CONNECTION ELECTRIC DIAGRAM (model Type 4 with option SRS/EDM)

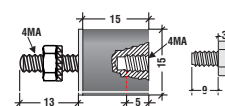


The drawing shows two modules, RX and TX, with the following dimensions and labels:

- Overall Dimensions:**
 - Width: 45
 - Height: 66
 - Module Height: 36
 - Distance between module centers: 84 ± 1
 - Distance from top edge to module top: 25
 - Distance from bottom edge to module bottom: 25
- Module RX (Left):**
 - Label: **RX**
 - Slot Side: **SLOT SIDE** (indicated by an arrow pointing right)
 - HP Limit: **HP LIMIT** (indicated by an arrow pointing left)
 - LEDs: **LED ORANGE** and **LED GREEN / RED** (indicated by arrows pointing left)
- Module TX (Right):**
 - Label: **TX**
 - Slot Side: **SLOT SIDE** (indicated by an arrow pointing left)
 - HP Limit: **HP LIMIT** (indicated by an arrow pointing right)
 - LED: **LED YELLOW** (indicated by an arrow pointing right)
 - Range Regulator: **REG** (indicated by an arrow pointing up to the label **RANGE REGULATOR**)
- Other Labels:**
 - HF** (High Frequency) is labeled on the left side of the RX module.
 - H** is labeled between the two modules.
 - 2 HOLES ø 4** is labeled at the top and bottom of the TX module.
 - 31 ± 1** is labeled between the two modules at the top.



$$HF = H - 10 \text{ mm}$$



SUPPEL70 =
Elastic supports
antivibrating sliding
on all the lenght
(OPTIONS)

SRS / EDM	Start Restart automatic/manual + EDM (External Device Monitoring)
OUTPUT CABLE	Output with direct cable lenght 5 meters
SUPPEL 70	Supports for the direct mounting of the profile (not orientable)
CB60 IP67	IP67 protection
CB60 IP69K	IP69K protection

COD 5	Cable TX M12 - 5 poles shielded 10 meters included in the supply
COD 8	Cable RX M12 - 8 poles shielded 10 meters included in the supply
BOX 2/4 (*)	External control unit for TYPE 4 upgrading
BOX-MUT	External control unit for neutralization - MUTING
SPV100	Mirrors at V for enclosures
SPV100 PLUS	Mirrors at V UNBREAKABLE for enclosures

Product Code	Distance	Mounting	OPTIONS (°°)	Maximum Range between TX and RX
OPT3-SMC-P400-0800	- - - -	- SMO	- - - -	NR = HP ... 6 meters MR = 6 ... 16 meters HR = 16 ... 30 meters

To be indicated on the order. The Light Curtain will be supplied pre-calibrated for an **immediate adjustment**

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BOX2/4 control unit together with the Safety Light Curtains TYPE 2 (model OPT3 SMC PXXX) upgrades the category to TYPE 4.

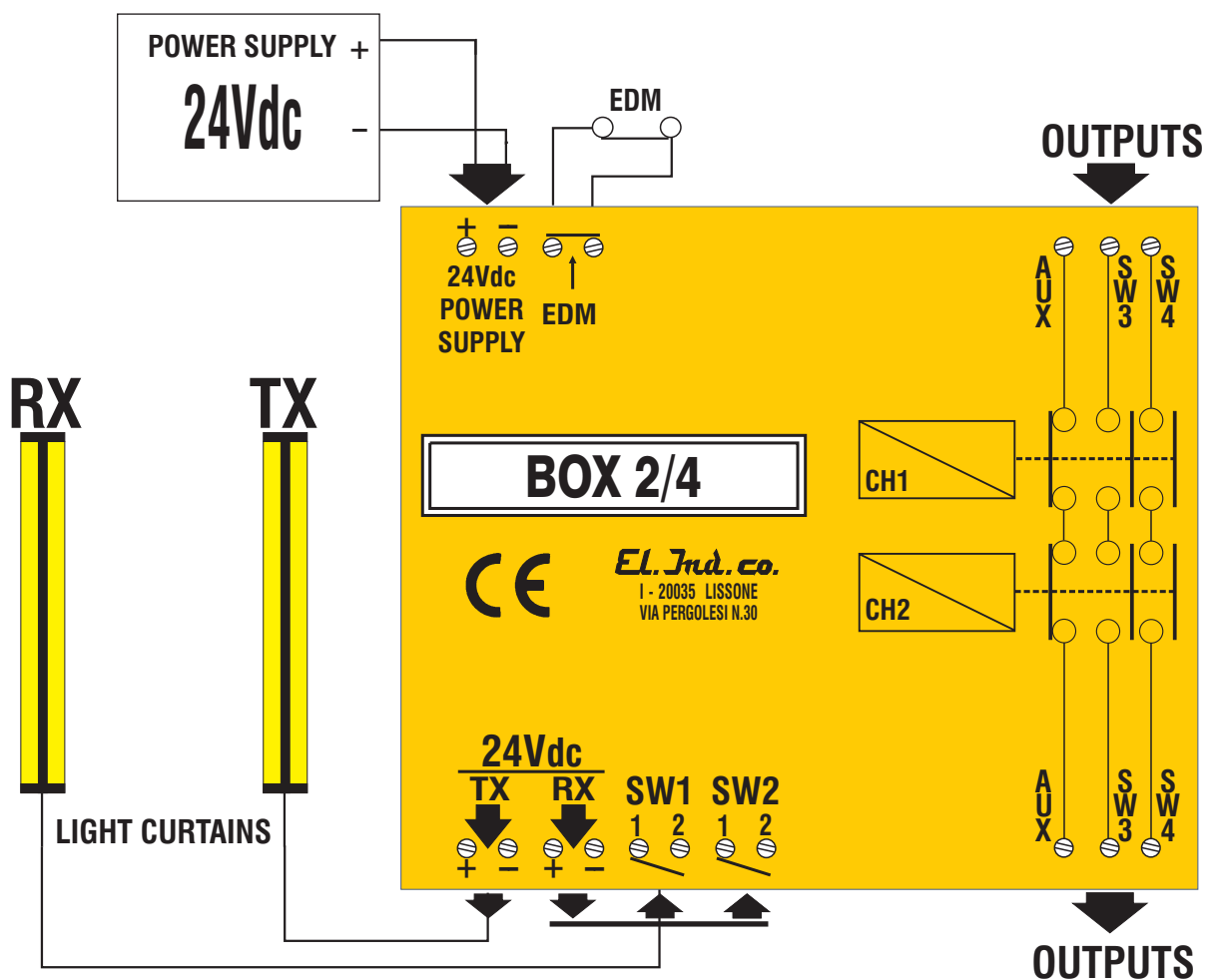
The control unit has got an input for the connection of the final switches of the light curtain which controls their disparity and supplies in its output the two contacts NC, in state of alert, coming from the two safety relays at guided contacts in redundancy selfcontrolled

Moreover the control unit provides these functions :

- **External Device Monitoring (EDM)** : control of the external devices : for example contactor, relay, etc...
- **Led Diagnostic** for failures signalling and detection
- **Contact AUX (Auxiliary) NC** normally closed

TECHNICAL FEATURES

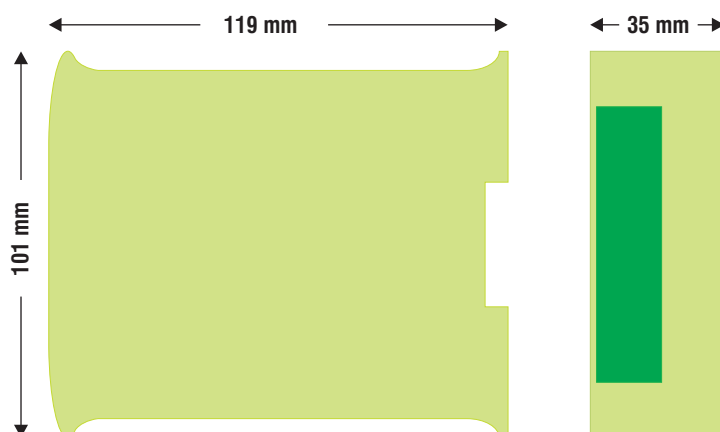
Power Supply	24Vdc \pm 10%
Absorption	60 mA
Type 2 Inputs	2 NO (switches SW1 - SW2)
Type 4 Outputs	2 NO (switches SW3 - SW4)
Outputs Current	5A @ 250Vac
Outputs Protection	fuses 5A
Contact AUX	1 NC - 3 A max (no safety)
Response Time	6 milliseconds
Housing	Blend PC/ABS self-autoextinguishing DIN RAIL (EN60715)
Housing Section	101 x 119 x 35 mm
Protection Degree	IP20
Working Temperature	0 / +55 °C
Directives	2006/42/CE - 2004/108/CE - 2006/95/CE
Standards	CEI-EN 61496/1 - CEI-CLC/TS 61496-2



N.B. The unit "BOX2/4" is provide with the EDM function temporarily disabled (jumper on terminal EDM).

If it becomes necessary to use other external devices (relays, etc...) to increase the output contacts, it is recommended to control the safety of these devices by remove the jumper in the terminal EDM and connect the contact or contacts NC of such devices in series in the terminal EDM.

MECHANICAL DIMENSIONS (millimeters)



HOW TO ORDER

Product Code

BOX 2/4



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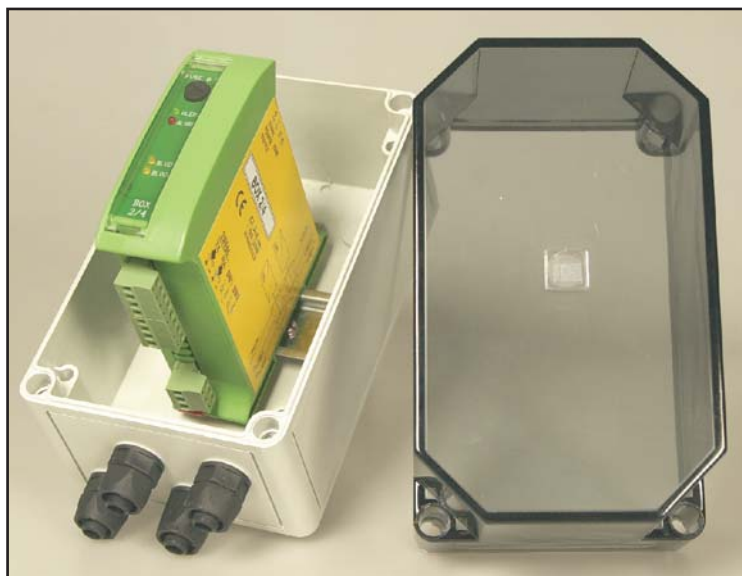
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BOX 2/4 IP66

Control unit for SAFETY UPGRADING TYPE 4 - SIL 3 SILCL 3 PL e



BOX 2/4 IP66 control unit together with the Safety Light Curtains TYPE 2 (model OPT3 SMC PXXX) upgrades the category to TYPE 4.

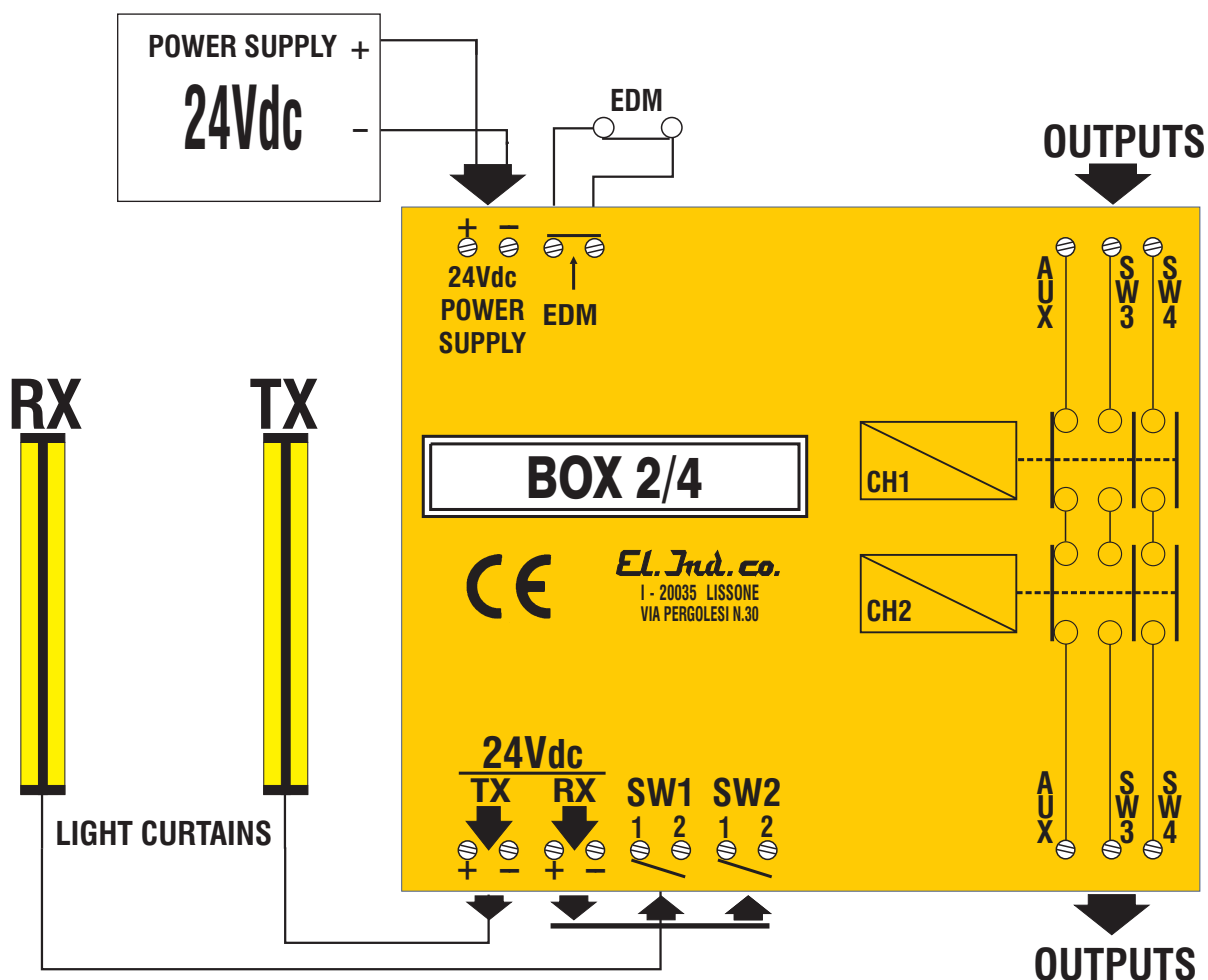
The control unit has got an input for the connection of the final switches of the light curtain which controls their disparity and supplies in its output the two contacts NC, in state of alert, coming from the two safety relays at guided contacts in redundancy selfcontrolled

Moreover the control unit provides these functions :

- **External Device Monitoring (EDM)** : control of the external devices : for example contactor, relay, etc...
- **Led Diagnostic** for failures signalling and detection
- **Contact AUX (Auxiliary) NC** normally closed

TECHNICAL FEATURES

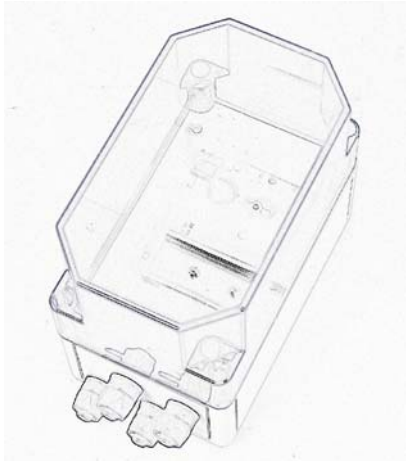
Power Supply	24Vdc \pm 10%
Absorption	60 mA
Type 2 Inputs	2 NO (switches SW1 - SW2)
Type 4 Outputs	2 NO (switches SW3 - SW4)
Outputs Current	5A @ 250Vac
Outputs Protection	fusibili 5A
Contact AUX	1 NC - 3 A max (no safety)
Response Time	6 milliseconds
Housing	Polycarbonate IP66 with transparent lid, fibre glass - rinf. (EN60529)
Housing Section	110 x 180 x 165 mm
Protection Degree	IP66
Working Temperature	0 / +55 °C
Directives	2006/42/CE - 2004/108/CE - 2006/95/CE
Standards	CEI-EN 61496/1 - CEI-CLC/TS 61496-2



N.B. The unit "BOX2/4" is provide with the EDM function temporarily disabled (jumper on terminal EDM).

If it becomes necessary to use other external devices (relays, etc...) to increase the output contacts, it is recommended to control the safety of these devices by remove the jumper in the terminal EDM and connect the contact or contacts NC of such devices in series in the terminal EDM.

MECHANICAL DIMENSIONS (millimeters)



A = 110mm

B = 165mm

C = 180mm

HOW TO ORDER

Product Code

BOX 2/4 IP66



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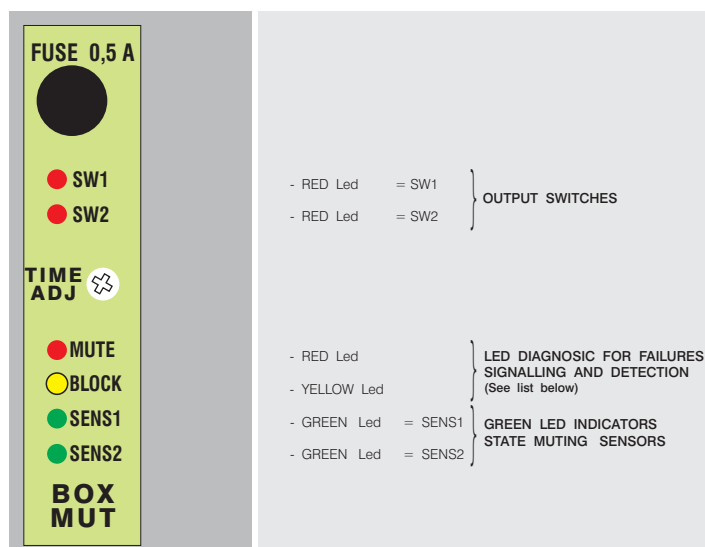
Temporary MUTING of the Safety Light Curtain in TYPE2 in relation to the cycle of the machine. The MUTING function is necessary for the normal automatic cycle of a plant when the object must cross the lightguard without provoking the machine stop.

The palletizer is an example since the palletized product must pass free through the area controlled by the light curtain, while the access of a person must provoke an immediate stop of the plant.

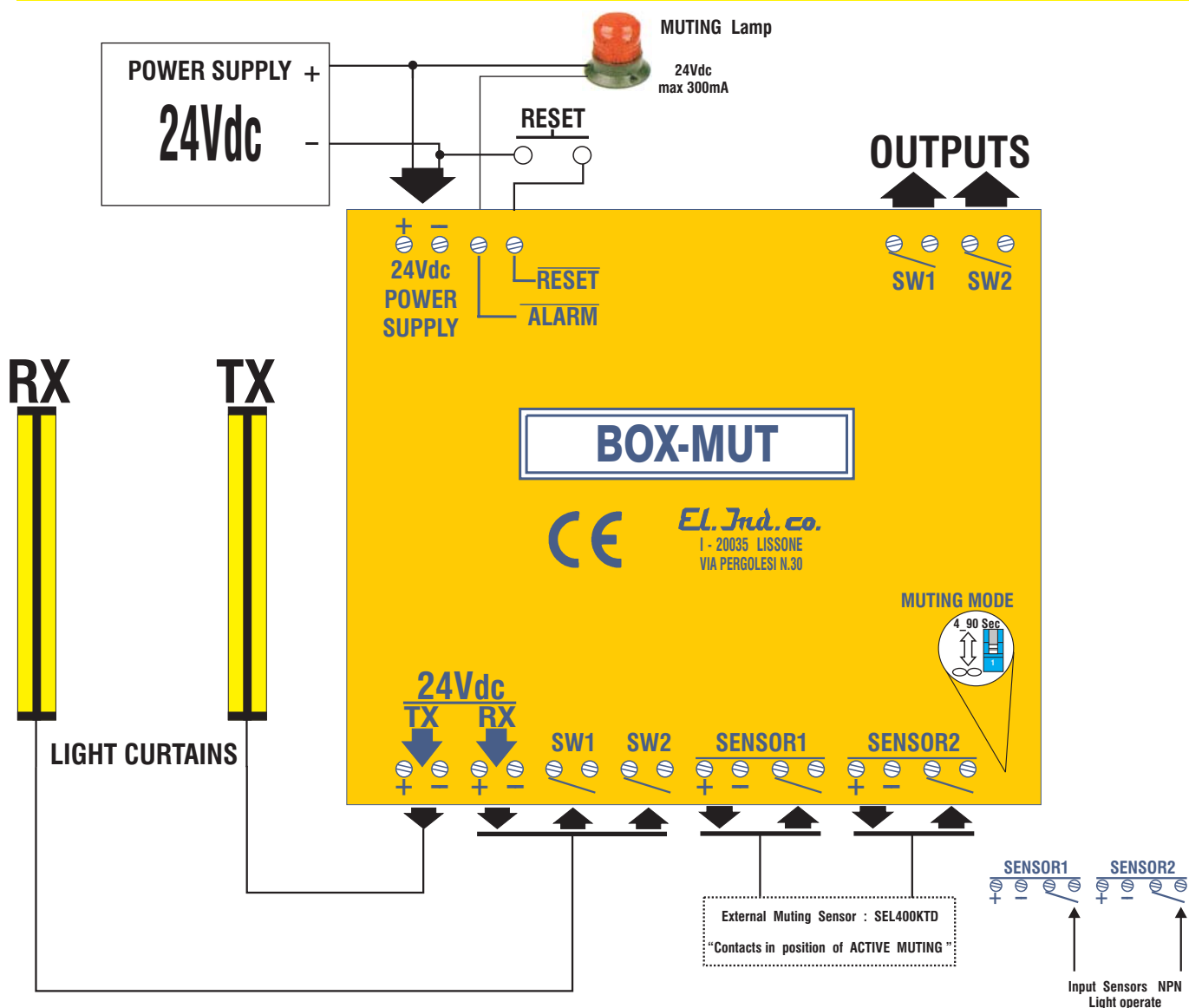
Applications : palletizers - robot area - mounting areas - industrial automatic warehouses - etc ...

TECHNICAL FEATURES

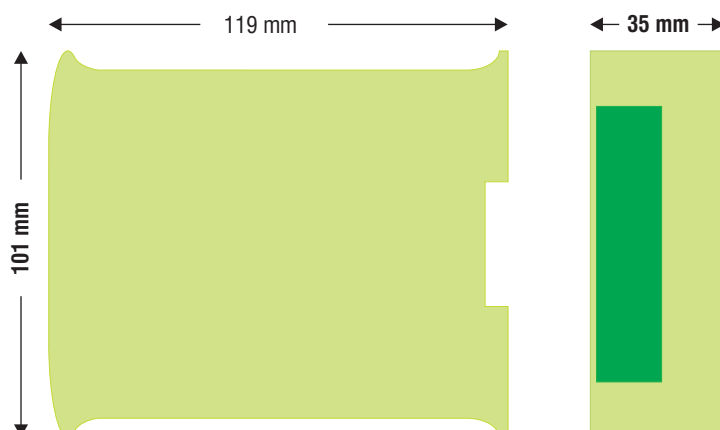
Power Supply	24Vdc \pm 10%
Absorption	40 mA
Type 2 Inputs	2 NO (switches SW1 - SW2)
Type 2 Outputs	2 NO (switches SW1 - SW2)
Outputs Current	0,75 A @ 40Vdc
Outputs Protection	Short circuit or overcharge
Input Muting Sensors	2 contacts NO or NPN (see diagram electrical connection)
MUTING Protection Time	4÷90 seconds or infinite through microswitches (MUTING MODE)
Housing	Blend PC/ABS self-autoextinguishing DIN RAIL (EN60715)
Housing Section	101 x 119 x 35 mm
Protection Degree	IP20
Working Temperature	0 / +55 °C
Directives	2006/42/EC - 2004/108/EC - 2006/95/EC
Standards	CEI-EN 61496/1 - CEI-CLC/TS 61496-2



LEDs STATE	SITUATION	SOLUTION
<ul style="list-style-type: none"> ● SW1 = } Following the state of the light curtain ● SW2 = } ● MUTE = OFF ● BLOCK = OFF ● SENS1 = ON ● SENS2 = ON 	<u>NORMAL OPERATION</u> No Muting request	
<ul style="list-style-type: none"> ● SW1 = ON ● SW2 = ON ● MUTE = BLINKING ● BLOCK = OFF ● SENS1 = OFF ● SENS2 = OFF 	<u>MUTING - ON</u> Corrects working of the machine and the Light Curtain in muting-mode. ALARM output in ON STATE (MUTING Lamp)	
<ul style="list-style-type: none"> ● SW1 = } Following the state of the light curtain ● SW2 = } ● MUTE = ON ● BLOCK = ON ● SENS1 = } State disparity sensors ● SENS2 = } 	<u>BLOCK</u> Disparity of Muting sensors "SENSOR1" "SENSOR2" more than 2 seconds	Eliminate the cause and then push the external button Reset
<ul style="list-style-type: none"> ● SW1 = OFF ● SW2 = OFF ● MUTE = OFF ● BLOCK = ON ● SENS1 = OFF ● SENS2 = OFF 	<u>MUTING NOT ALLOWED</u> Request of Muting when the light curtain is in the alarm state	Free the sensitive curtain of the light curtain and the Muting sensors from possible obstacle
<ul style="list-style-type: none"> ● SW1 = } Following the state of the light curtain ● SW2 = } ● MUTE = } Simultaneous blinking ● BLOCK = } ● SENS1 = OFF ● SENS2 = OFF 	<u>TIME - OUT</u> Muting time over-range set by the regulator TIME- ADJ (only MUTING MODE set on 4 ÷ 90 sec.)	Free the stand still obstacle among the Muting sources (photocells, switches, etc...)



MECHANICAL DIMENSIONS (millimeters)



HOW TO ORDER

Product Code

BOX-MUT

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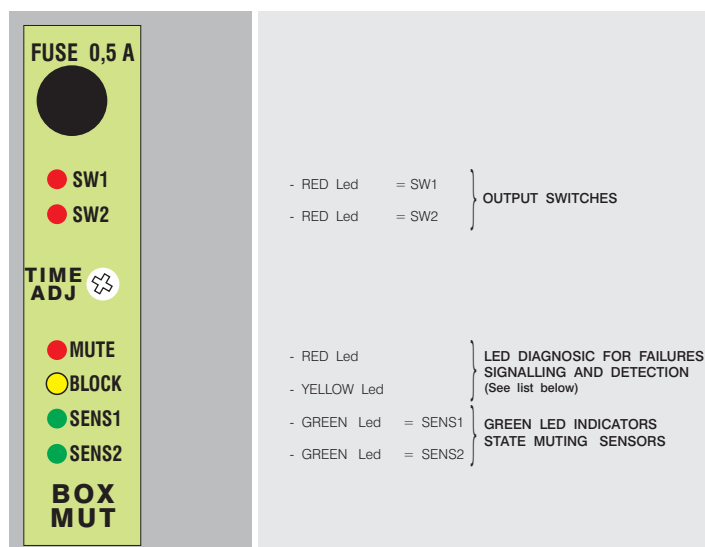
Temporary MUTING of the Safety Light Curtain in TYPE2 in relation to the cycle of the machine. The MUTING function is necessary for the normal automatic cycle of a plant when the object must cross the light curtain without provoking the machine stop.

The palletizer is an example since the palletized product must pass free through the area controlled by the light curtain, while the access of a person must provoke an immediate stop of the plant.

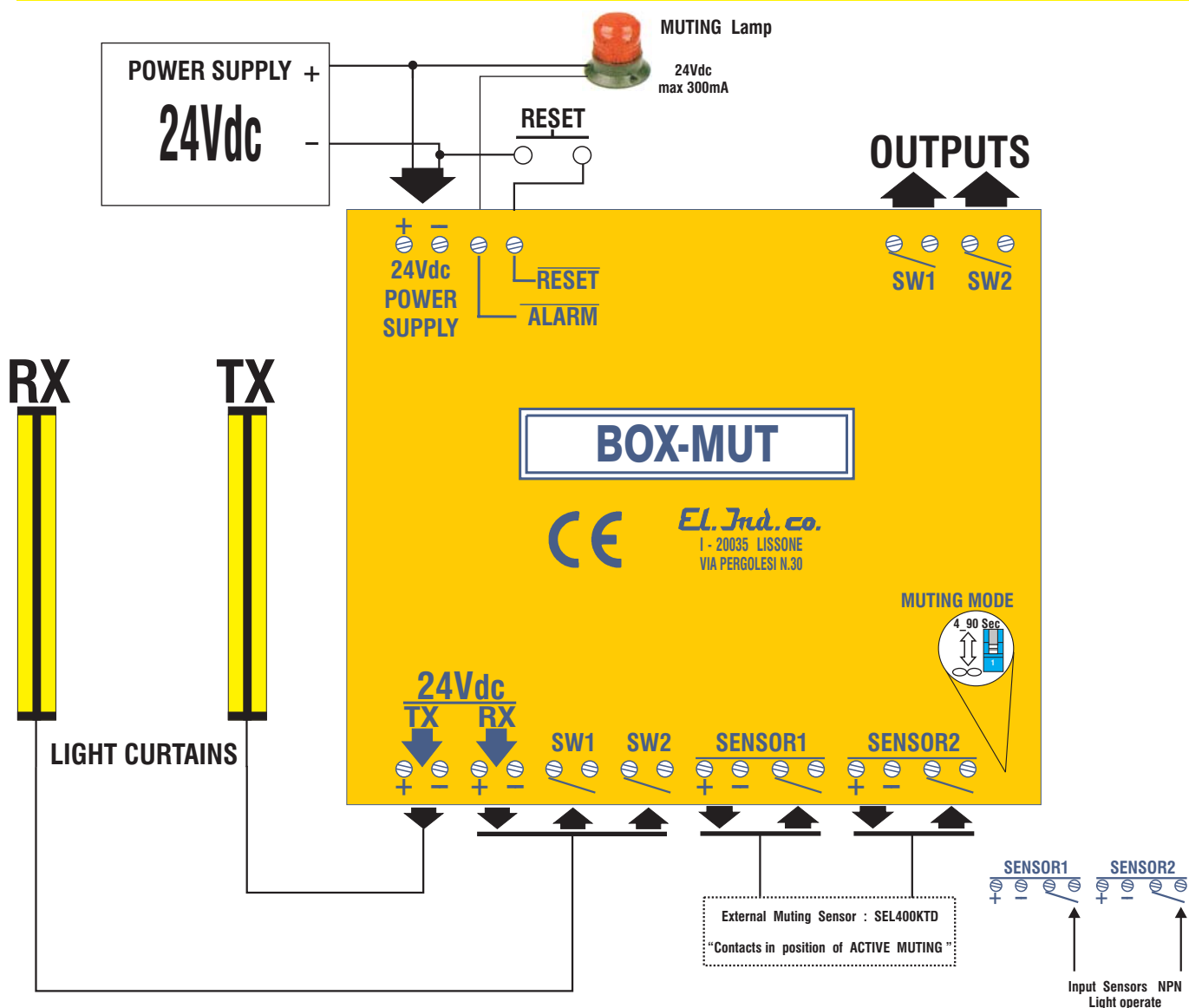
Applications : palletizers - robot area - mounting areas - industrial automatic warehouses - etc ...

TECHNICAL FEATURES

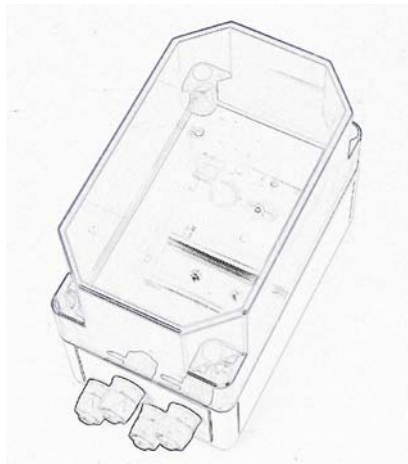
Power Supply	24Vdc \pm 10%
Absorption	40 mA
Type 2 Inputs	2 NO (switches SW1 - SW2)
Type 2 Outputs	2 NO (switches SW1 - SW2)
Outputs Current	0,75 A @ 40Vdc
Outputs Protection	Short circuit or overcharge
Input Muting Sensors	2 contacts NO or NPN (see diagram electrical connection)
MUTING Protection Time	4÷90 seconds or infinite through microswitches (MUTING MODE)
Housing	Polycarbonate IP66 with transparent lid, fibre glass - rinf. (EN60529)
Housing Section	101 x 119 x 35 mm
Protection Degree	IP20
Working Temperature	0 / +55 °C
Directives	2006/42/EC - 2004/108/EC - 2006/95/EC
Standards	CEI-EN 61496/1 - CEI-CLC/TS 61496-2



LEDs STATE	SITUATION	SOLUTION
● SW1 = } Following the state of the light curtain ● SW2 = } ● MUTE = OFF ● BLOCK = OFF ● SENS1 = ON ● SENS2 = ON	<u>NORMAL OPERATION</u> No Muting request	
● SW1 = ON ● SW2 = ON ● MUTE = BLINKING ● BLOCK = OFF ● SENS1 = OFF ● SENS2 = OFF	<u>MUTING - ON</u> Corrects working of the machine and the light curtain in muting-mode. ALARM output in ON STATE (MUTING Lamp)	
● SW1 = } Following the state of the light curtain ● SW2 = } ● MUTE = ON ● BLOCK = ON ● SENS1 = } State disparity sensors ● SENS2 = }	<u>BLOCK</u> Disparity of Muting sensors "SENSOR1" "SENSOR2" more than 2 seconds	Eliminate the cause and then push the external button Reset
● SW1 = OFF ● SW2 = OFF ● MUTE = OFF ● BLOCK = ON ● SENS1 = OFF ● SENS2 = OFF	<u>MUTING NOT ALLOWED</u> Request of Muting when the light curtain is in the alarm state	Free the sensitive curtain of the light curtain and the Muting sensors from possible obstacle
● SW1 = } Following the state of the light curtain ● SW2 = } ● MUTE = } Simultaneous blinking ● BLOCK = } ● SENS1 = OFF ● SENS2 = OFF	<u>TIME - OUT</u> Muting time over-range set by the regulator TIME- ADJ (only MUTING MODE set on 4 ÷ 90 sec.)	Free the stand still obstacle among the Muting sources (photocells, switches, etc...)



MECHANICAL DIMENSIONS (millimeters)



A = 110mm

B = 165mm

C = 180mm

HOW TO ORDER

Product Code

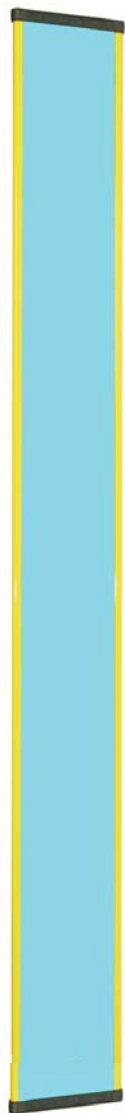
BOX-MUT IP66

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SMO
(Orientable Support Brackets)

Fig.1



BTO
(Orientable Ground Base)

Fig.2

The mirrors for immaterial enclosures can be orientable (SMO) or supplied with Orientable/movable Ground Base (BTO).

The mirror is inserted into a V aluminium housing yellow coloured RAL1021 as foreseen in the standards for all the safety components used in the industry.

It is normally supplied by including Orientable Support Brackets (SMO) for attachment (Fig.3 and Fig.4)

The mirror SPV100 used with its Orientable/movable Ground Base (BTO) (optional) is easier to install and it allows a precise adjustment.

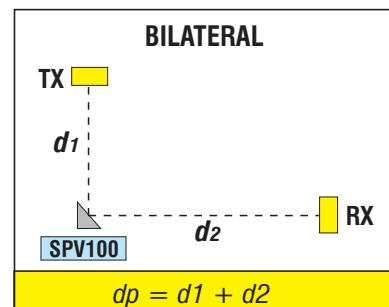
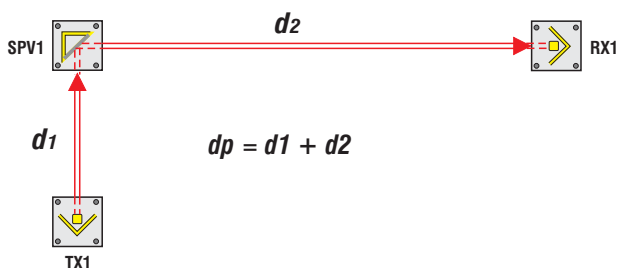
The use of the mirror reduces the total distance between TX and RX as indicated in the paragraph ATTENUATION CALCULATIONS.

The mirror height is calculated when you order according to the lightguard model you order.

Anyway if you want to know effective height of the mirror (HU) you add 200 mm to the protected height (HP) of the lightguard chosen if the mirror is required with fastening SMO (Orientable Support Brackets) or you add 360mm to the protected height (HP) if the mirror is required with the BTO (Orientable Ground Base).

ATTENUATION CALCULATIONS

EXAMPLE OF THE BILATERAL SYSTEM N.1 LIGHT CURTAIN PAIR + N.1 MIRROR



where dp = perimeter

ATTENUATION MIRROR 20%

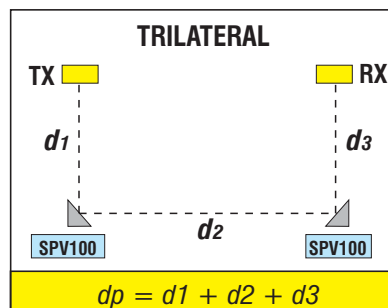
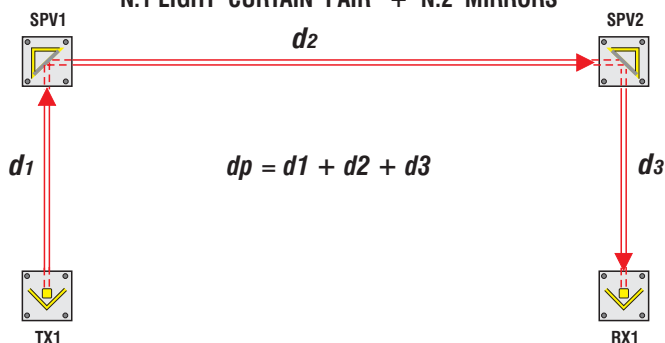
Perimetral max distance of the Light Curtain divides up model is :

NR = 6 meters - 20% = 4,8 meters

MR = 16 meters - 20% = 12,8 meters

HR = 30 meters - 20% = 24,0 meters

EXAMPLE OF THE TRILATERAL SYSTEM N.1 LIGHT CURTAIN PAIR + N.2 MIRRORS



where dp = perimeter

ATTENUATION MIRROR 36%

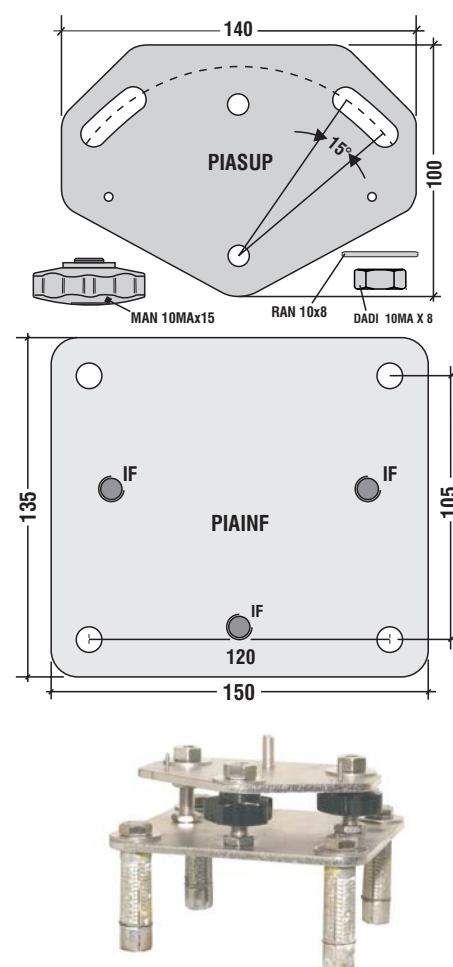
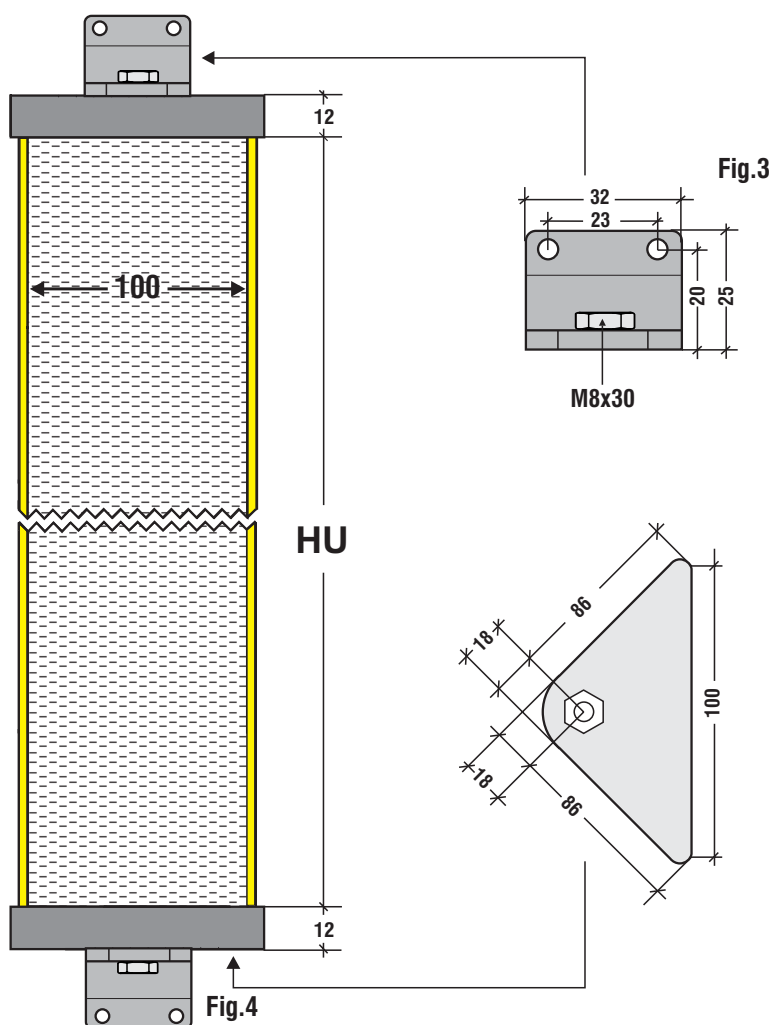
Perimetral max distance of the Light Curtain divides up model is :

NR = 6 meters - 36% = 3,8 meters

MR = 16 meters - 36% = 10,2 meters

HR = 30 meters - 36% = 19,2 meters

MECHANICAL DIMENSIONS (millimeters)



HOW TO ORDER

Product Code

SPV100 HU

When you order together with the protected height HP of the Light Curtain the HU height of the most suitable mirror will be given

ATTENTION !!! When ordering always specify the length of the sides of the perimeter (See the ATTENUATION CALCULATIONS)

BTO 110x80 (Orientable Ground Base)

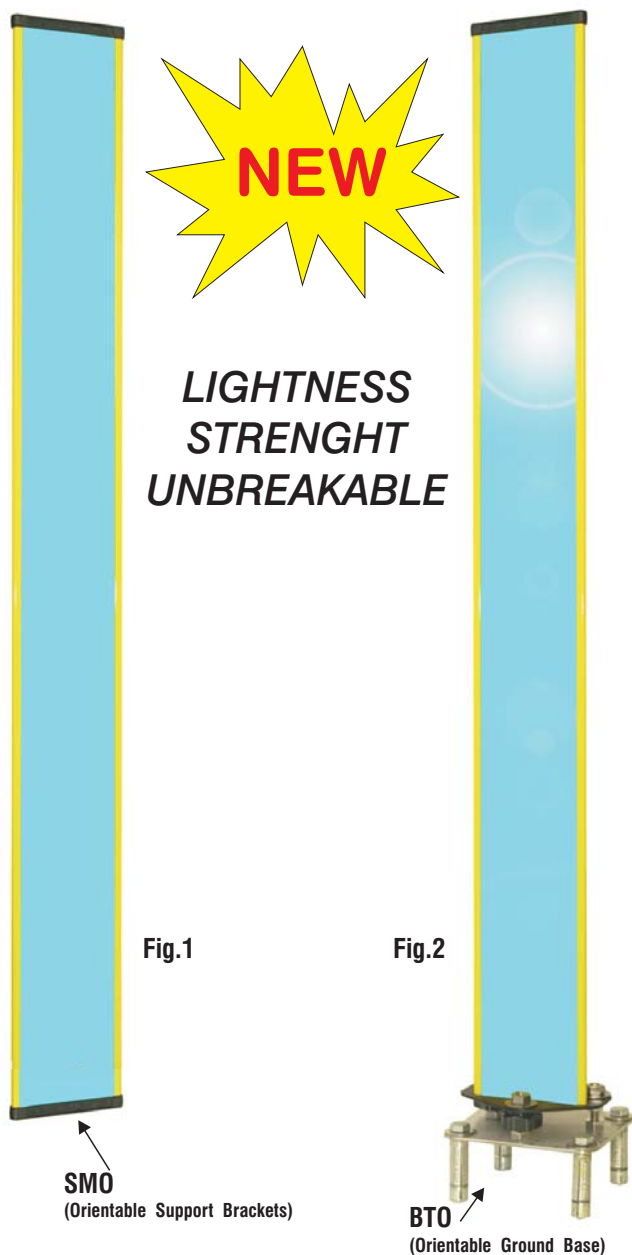


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The mirrors "SPV100 PLUS" for the realization of enclosure are **light, strong and unbreakable**.

These features gives the mirror "SPV100 PLUS" can be used in environments where the traditional one can not be used (example food processing).

The mirror is inserted into a V aluminium housing yellow coloured RAL1021 as forseen in the standards for all the safety components used in the industry.

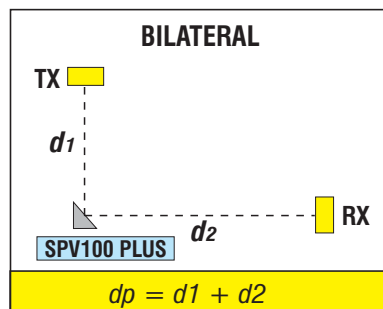
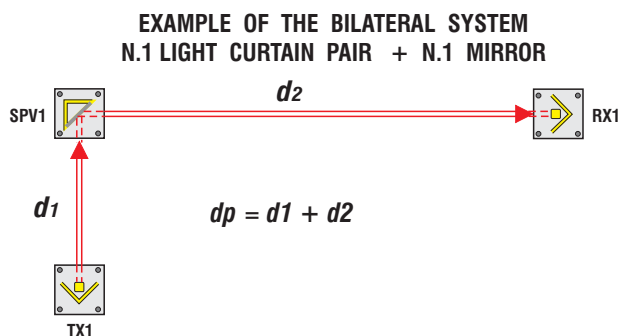
It is normally supplied by including Orientable Support Brackets (SMO) for attachment (Fig.3 and Fig.4) or its Orientable/movable Ground Base (BTO) (optional) for easy installation allowing a precise orientation.

The use of the mirror reduces the total distance between TX and RX as indicated in the paragraph ATTENUATION CALCULATIONS.

The mirror height is calculated when you order according to the lightguard model you order.

Anyway if you want to know effective height of the mirror (HU) you add 200mm to the protected height (HP) of the lightguard chosen if the mirror is required with fastening SMO (Orientable Support Brackets) or you add 360mm to the protected height (HP) if the mirror is required with the BTO (Orientable/movable Ground Base).

ATTENUATION CALCULATIONS



where dp = perimeter

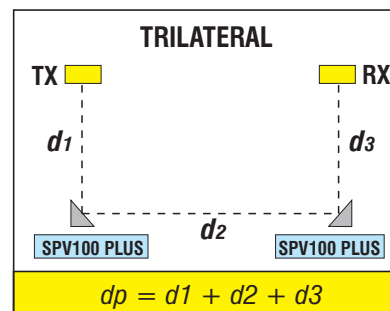
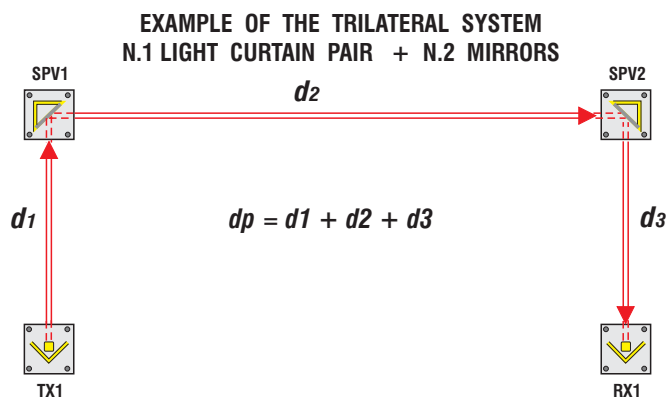
ATTENUATION MIRROR 25%

Perimetral max distance of the Light Curtain divides up model is :

NR = 6 meters - 25% = 4,5 meters

MR = 16 meters - 25% = 12,0 meters

HR = 30 meters - 25% = 22,5 meters



where dp = perimeter

ATTENUATION MIRROR 45%

Perimetral max distance of the Light Curtain divides up model is :

NR = 6 meters - 45% = 3,3 meters

MR = 16 meters - 45% = 8,8 meters

HR = 30 meters - 45% = 16,5 meters

TECHNICAL FEATURES

Chemical Resistance

Following is a brief list of all chemical products that in contact with the mirror **"SPV100 PLUS"** may damage this.

You should not use the following chemical products :

- Benzene
- Carbone Tetrachloruro
- Etere
- Alcool Ethyl
- Esterstoluene
- Ketones
- Lacquer Thinners
- Methyl Alcool

Inflammability

The mirror **"SPV100 PLUS"** is combustible.

They must also be observed with the material all the precautions taken to protect the wood and other fuels in flames and high temperatures.

Cleaning

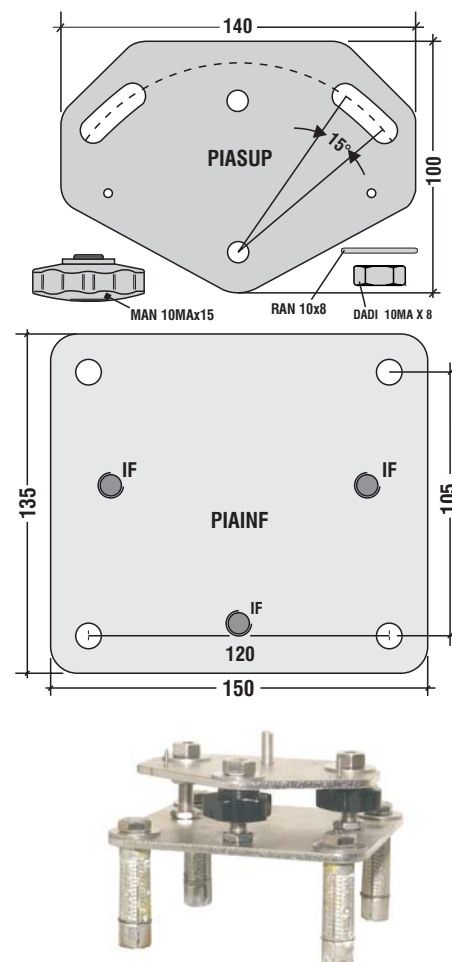
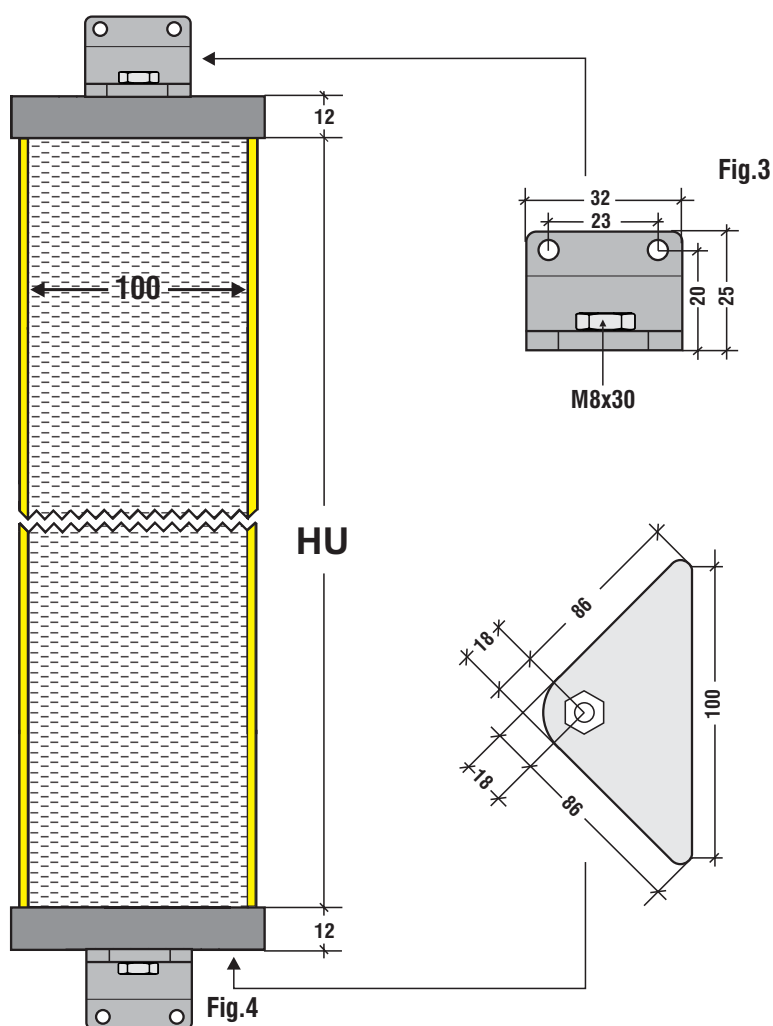
To clean the surface of the mirror **"SPV100 PLUS"**, you should use a mild soap, water and a soft cloth using light pressure.

To remove grease, oil or tar residue on the material you need to use hexane, kerosene and naphtha.

We don't recommend the use of chemicals, no sprays too aggressive to the glasses.

Weight - Strenght

The mirror plate is very light. It weights less than half of the glass and has a resistance 14 times higher than the glass itself.



HOW TO ORDER

Product Code

SPV100 HU

When you order together with the protected height HP of the Light Curtain the HU height of the most suitable mirror will be given

ATTENTION !!! When ordering always specify the length of the sides of the perimeter (See the ATTENUATION CALCULATIONS)

BTO 110x80 (Orientable Ground Base)



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CB 60 - CB60 THERM

TRANSPARENT CYLINDRIC BOX IP67 WITH INSIDE HEATHER



Suitable models **OPT3 SMC PXXX**

Housing Material **Thermoplastic PMM** (polymethyl methacrylate)

Mounting **SMO** (orientable support brackets)

Output **Connectors M12**

Protection Degree **IP67**

Resistance to the atmospheric agents

- Alkaline substances
- weak acid
- neutral soap
- alcohol 60°

Not resistance to the chemical agents

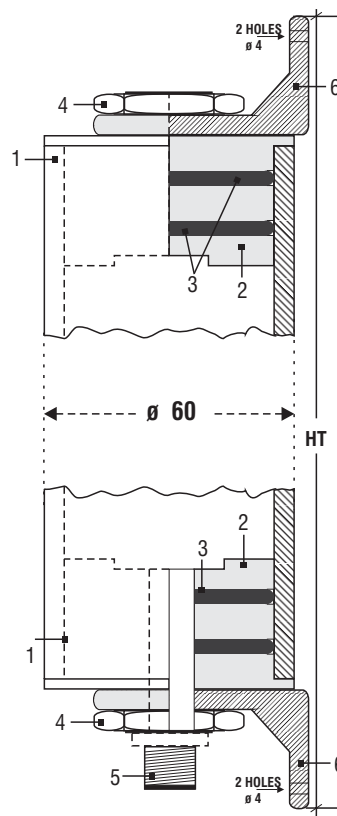
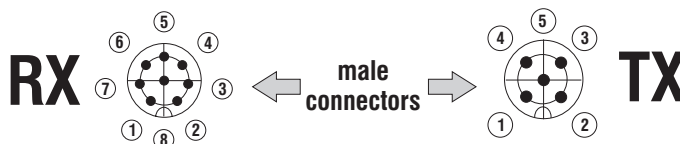
- aliphatic hydrocarbon
- hydrocarbon aromatic composit
- gas oil

TECHNICAL FEATURES TRANSPARENT CYLINDRIC BOX

Breaking load (5mm/min)	73 MPa ISO/R 527
Bumps resistance (+23°C)	6 KJ/m2 ISO 179/1 e U
Elastic module at traction	3200 MPa DIN53547
Linear thermic dilatation	0,8 E-4/PC ASTM E831
Deformation to the heat	0,45 MPa ISO75

**models OPT3**
 $HT = HP + H1 + H2$
 $H1 = 81 \text{ mm}$
 $H2 = 134 \text{ mm}$
LEGEND

- 1 = Transparent thermoplastic I.R.
- 2 = Tin cap aluminium
- 3 = Elastomeric gasket
- 4 = Hexagonal nut 1/2 inch x 4 mm INOX A2
- 5 = Plug M12
- 6 = Orientable bracket in polyamides reinforced in glass fiber

**CONNECTIONS FOR THE CB 60**

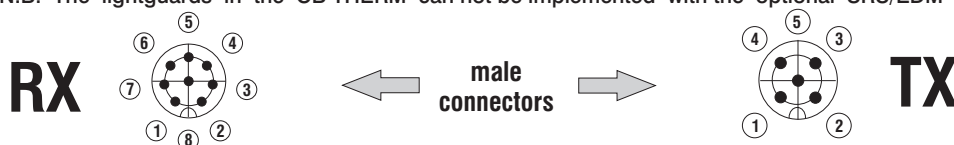
- 1) White = N.C.
- 2) Brown = + 24Vdc
- 3) Green = SW1
- 4) Yellow = SW2
- 5) Grey = SW2
- 6) Pink = -
- 7) Blue = -
- 8) Red = N.C.
- Shield = \perp

- 1) Brown = + 24Vdc
- 2) White = TEST INPUT
- 3) Blue = -
- 4) Black = TEST INPUT
- 5) Grey = N.C.
- Shield = \perp

TEST INPUT = Connect the 2 threads, white and black is simulated the interruption of the curtain test the correct opening of the outputs SW1 - SW2 of the receiving unit

CONNECTIONS FOR THE CB60 THERM

N.B. The lightguards in the CB THERM can not be implemented with the optional SRS/EDM



- 1) White = + 24Vdc
 - 2) Brown = + 24Vdc
 - 3) Green = SW1
 - 4) Yellow = SW2
 - 5) Grey = SW2
 - 6) Pink = -
 - 7) Blue = -
 - 8) Red = -
 - Shield = \perp
- Power supply internal heater 24Vdc

- 1) Brown = + 24Vdc
 - 2) White = TEST INPUT
 - 3) Blue = -
 - 4) Black = -
 - 5) Grey = -
 - Shield = \perp
- Power supply internal heater 24Vdc

TEST INPUT = Bring the thread white to negative (blue) is simulated the interruption of the curtain test the correct opening of the outputs SW1 - SW2 of the receiving unit

HOW TO ORDER

Product Code

CB60

CB60 THERM

WITH INSIDE HEATHER



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NEW 2012 - IP69K



Suitable models	OPT3 SMC PXXX
-----------------	---------------

Housing Material	Thermoplastic PMM (polymethyl methacrylate)
------------------	---

Mounting	SMO (orientable support brackets)
----------	-----------------------------------

Output	Connectors M12
--------	----------------

Protection Degree	IP69K
-------------------	-------

Resistance to the atmospheric agents	<ul style="list-style-type: none"> - Alkaline substances - weak acid - neutral soap - alcohol 60°
--------------------------------------	---

Not resistance to the chemical agents	<ul style="list-style-type: none"> - aliphatic hydrocarbon - hydrocarbon aromatic composit - gas oil
---------------------------------------	---

CERTIFICATO DI CONFORMITA' IP69K



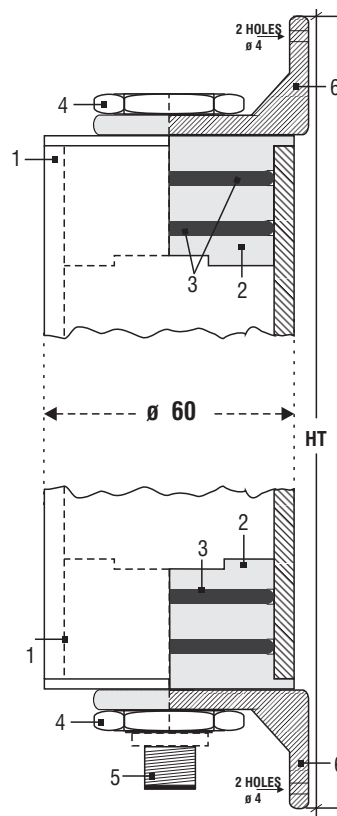
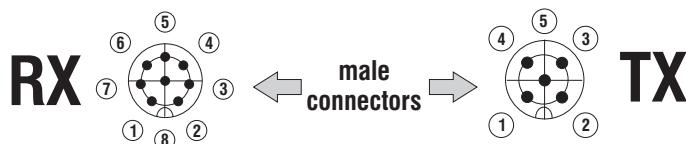
No. AK 60042095 0001

TECHNICAL FEATURES TRANSPARENT CYLINDRIC BOX

Breaking load (5mm/min)	73 MPa ISO/R 527
Bumps resistance (+23°C)	6 KJ/m2 ISO 179/1 e U
Elastic module at traction	3200 MPa DIN53547
Linear thermic dilatation	0,8 E-4/PC ASTM E831
Deformation to the heat	0,45 MPa ISO75

**models OPT3**
 $HT = HP + H1 + H2$
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LEGEND

- 1 = Transparent thermoplastic I.R.
- 2 = Tin cap aluminium
- 3 = Elastomeric gasket in silicone rubber
- 4 = Hexagonal nut 1/2 inch x 4 mm INOX A2
- 5 = Plug M12
- 6 = Orientable bracket in polyamides reinforced in glass fiber

**CONNESSIONI OPT3 SMC PXXX IN CB60 - IP69K**

- 1) White = N.C.
- 2) Brown = + 24Vdc
- 3) Green = SW1
- 4) Yellow = SW2
- 5) Grey =
- 6) Pink =
- 7) Blue =
- 8) Red = N.C.
- Shield =

- 1) Brown = + 24Vdc
- 2) White = TEST INPUT
- 3) Blue =
- 4) Black = TEST INPUT
- 5) Grey = N.C.
- Shield =

TEST INPUT = Connect the 2 threads, white and black is simulated the interruption of the curtain test the correct opening of the outputs SW1 - SW2 of the receiving unit

HOW TO ORDER

Product Code
CB60 - IP69K



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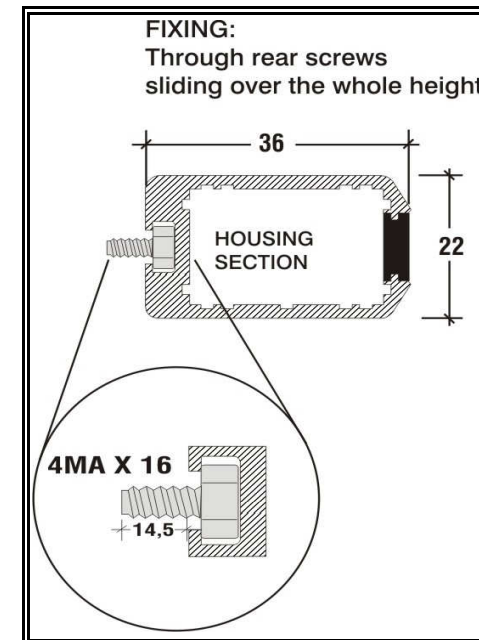
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QUICK GUIDE TO THE CHOICE OF MODEL "FLY PXXX"

Model	FLY P004		FLY P008		FLY P016	
Number rays	Height (HP) (HT)		Height (HP) (HT)		Height (HP) (HT)	
5 x 5			66	145	127	206
7 x 7					188	267
9 x 9	66	145	127	206	249	328
11 x 11					310	389
13 x 13			188	267	371	450
15 x 15					432	511
17 x 17	127	206	249	328	493	572
19 x 19					554	633
21 x 21			310	389	615	694
23 x 23					676	755
25 x 25	188	267	371	450	737	816
27 x 27					798	877
29 x 29			432	511	859	938
31 x 31					920	999
33 x 33	249	328	493	572	981	1060
35 x 35					1042	1121
37 x 37			554	633	1103	1182
39 x 39					1164	1243
41 x 41	310	389	615	694	1225	1304



HP= Controlled Height in mm
HT= Total Height in mm
PXXX= Resolution of the light curtain (EX: P008= Resolution 8 mm)

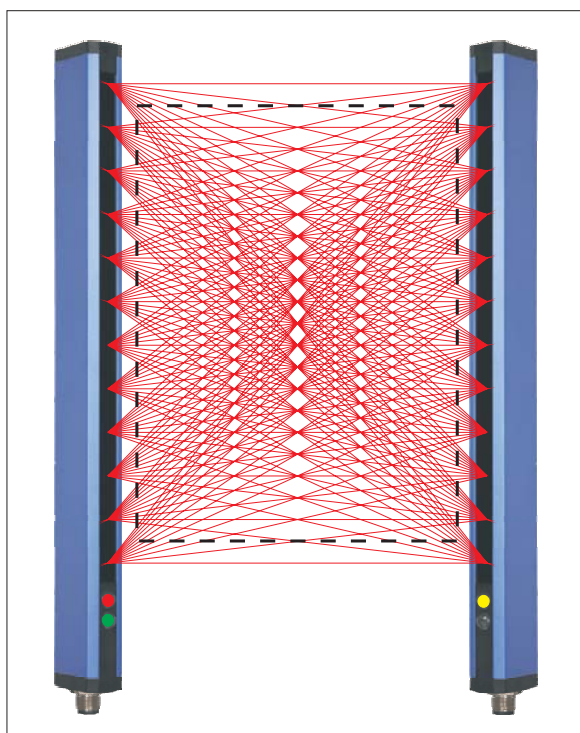
Note: The columns show all important dimensions for the various measures. In the drawing is shown the section of the Light curtain

Note: On request we can supply different heights and resolutions



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 TEL 039/24.57.587 - FAX 039/46.10.56
 e-mail elind@betam.it - internet www.elindco.it

Lissone 10 January 2013



Resolution 4 mm

Controlled Height 66 ÷ 310 mm

Controlled Range HP ÷ 4000 mm

Outputs 2 PNP

Directives 2004/108/EC - 2006/95/EC

Light Curtain for the detection at infrared rays for the control - automation - objects presence control on areas - object passage detection on a conveyor - pieces counting - etc ..

Light Curtain FLY-P004 are NOT safety devices and must not be used for safety control of the machines on which they are installed.

CONTROLLED AREAS HEIGHT

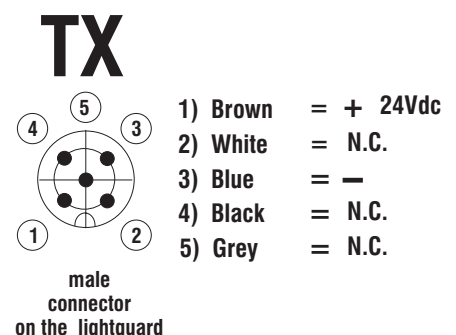
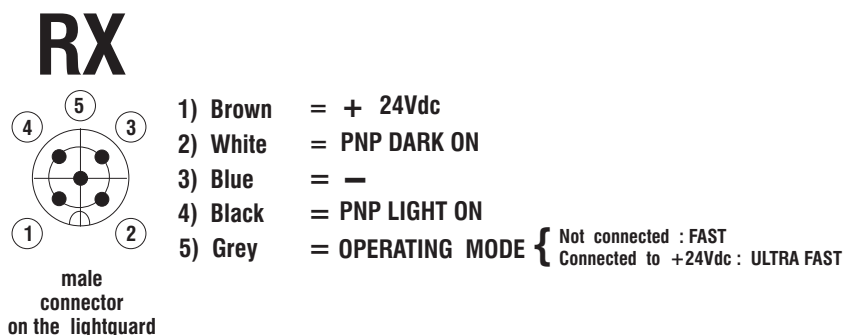
Product Code	Controlled Height Presence Detection	HP mm Counting (hatch area recommended)	Total Height HT mm	Response Time ms (*)	Working Distance controlled min/max mm
FLY-P004-0066	66	58	145	2,6	HP - 4000
FLY-P004-0127	127	119	206	4,7	HP - 4000
FLY-P004-0188	188	180	267	6,8	HP - 4000
FLY-P004-0249	249	241	328	8,9	HP - 4000
FLY-P004-0310	310	302	389	11,0	HP - 4000

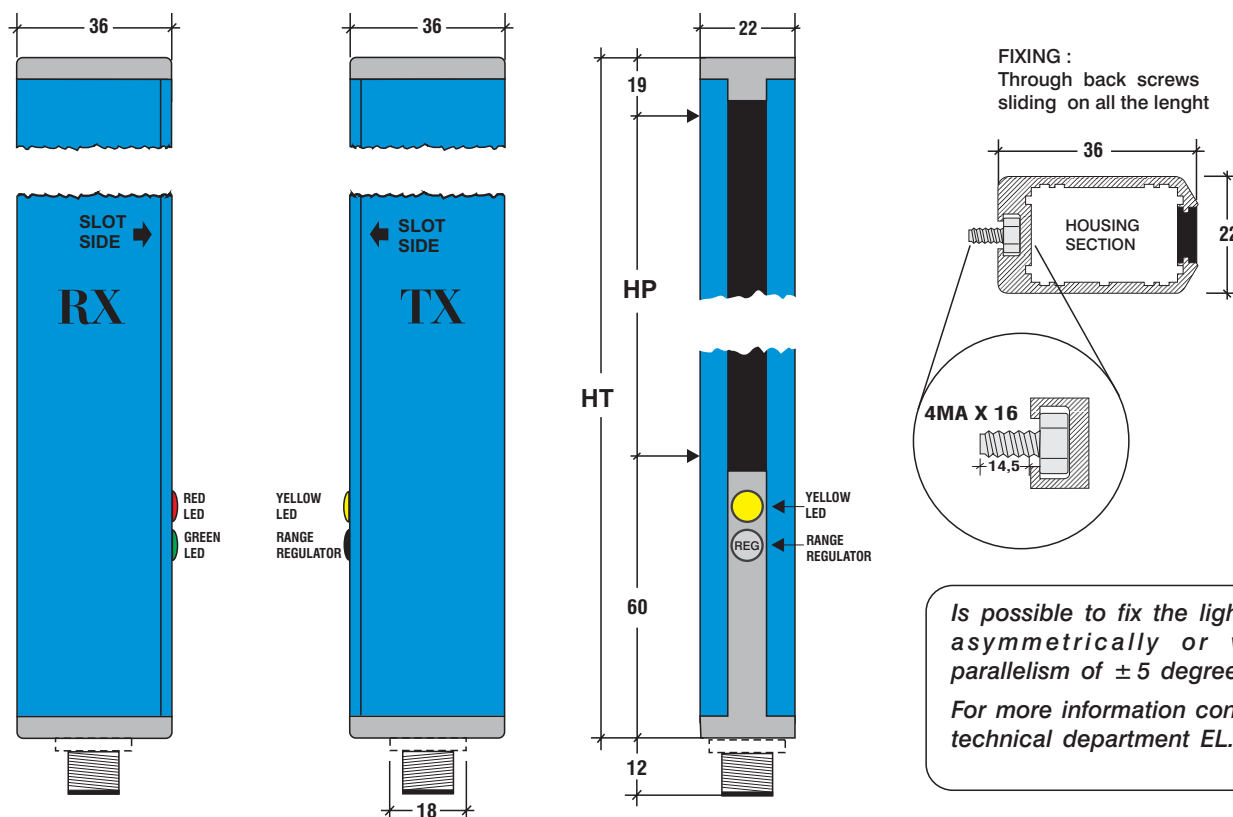
(*) The object to be detected must occlude the curtain for a time equal to or greater than the response time

Power Supply	24Vdc \pm 10% (You may use the same power for both units TX/RX) Protection against reverse polarity
Absorption TX - RX Units	130 mA max exclusive of load
Outputs	2 PNP static outputs + 1 Light ON + 1 Dark ON max 150 mA
Output Protection	Short circuit and overload (In case of short circuit and / or remove the overload power for at least 3 seconds)
Operating Mode	Fast up to 500 pcs / min - Ultra fast up to 2000 pcs / min (depending on the length of the object to be detected)
Time Pulse Output	Fast minimum 100 ms - Ultra fast minimum 15 ms
LED Signallings	<p>TX Unit</p> <ul style="list-style-type: none"> - Yellow Led ON = Power Supply <p>RX Unit</p> <ul style="list-style-type: none"> - Green Led ON = Curtain free - Red Led ON = Curtain occluded - Green and Red Led ON = Overload / Short circuit
Working Temperature	0 / +50 °C
TX - RX Connection	Nr. 2 Connectors M12 5 poles female to wire driving included in the supply
Synchronism	Optical
Housing	Polished Aluminium BLU RAL5015
Housing Section	22 x 36 mm
Protection Degree	IP54 (option IP67 - IP69K)
Fixing	Through back screws sliding on the length 4MA x 16

PRECAUTIONS

- Avoid installations near sources of light very intense, especially in proximity of the receiving unit.
- The presence of strong electromagnetic interference could influence the correct functioning of the device.
- Reflective surfaces placed in the proximity of the device can introduce passive reflections that can affect the detection of the object inside the controlled area.
- If you need to install more devices should be avoided adjacent to the emitter of a device is interfering with the receiver of another device.

CONNECTION ELECTRIC DIAGRAM




MOUNTING - ALIGNMENT

Install the two units TX (transmitter) and RX (receiver) to the operating distance of work indicated on the data written on the labels so that they are as parallel as possible.

RECALIBRATION

In case you need to change the working distance between the TX and RX perform the following procedure : turn the trimmer cap under the "Range Regulator" counter-clockwise until the full scale and give power to both units simultaneously TX and RX.

On the TX light will be yellow and the red light on the RX.

Turn the trimmer slowly clockwise until it causes the drive RX switching the lamp from RED to GREEN.

This operation must be done at least twice.

The final position of the trimmer will be the closest point to the stable release of the switching GREEN-RED of the lights.

We recommend that you perform this procedure after selecting the operating mode FAST or ULTRAFAST or after any change of operating mode.

HOW TO ORDER

Product Code

Distances

FLY-P004-0127 - - - -

Working distance in mm.

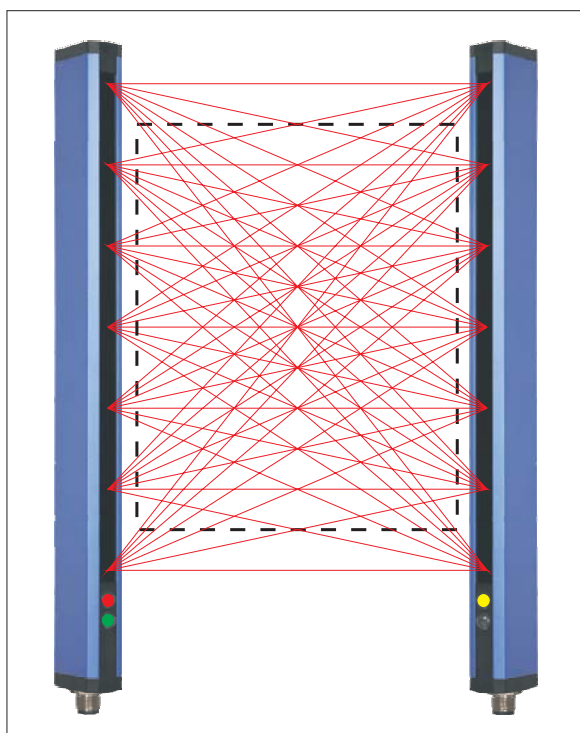
To be indicated on the order. The light curtain will be supplied pre calibrated for **an immediate adjustment**

Example : FLY-P004-0127 - 1000



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Resolution 8 mm

Controlled Height 66 ÷ 554 mm

Controlled Range HP ÷ 4000 mm

Outputs 2 PNP

Directives 2004/108/EC - 2006/95/EC

Light Curtain for the detection at infrared rays for the control - automation - objects presence control on areas - object passage detection on a conveyor - pieces counting - etc ..

Light Curtain FLY-P008 are NOT safety devices and must not be used for safety control of the machines on which they are installed.

CONTROLLED AREAS HEIGHT

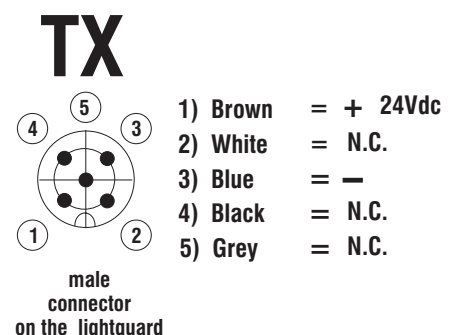
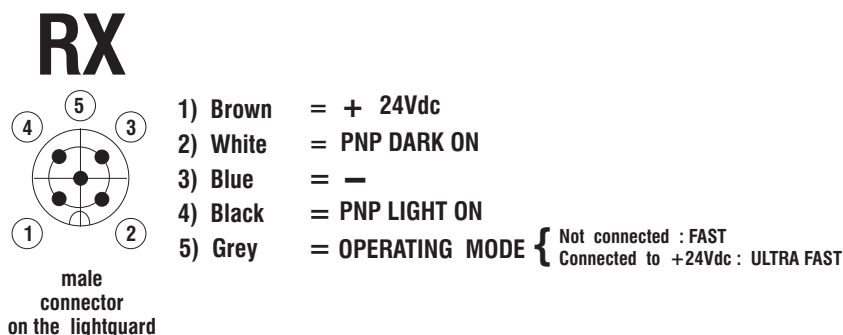
Product Code	Controlled Height Presence Detection	HP mm Counting (hatch area recommended)	Total Height HT mm	Response Time ms (*)	Working Distance controlled min/max mm
FLY-P008-0066	66	50	145	1,5	HP - 4000
FLY-P008-0127	127	111	206	2,6	HP - 4000
FLY-P008-0188	188	172	267	3,6	HP - 4000
FLY-P008-0249	249	233	328	4,7	HP - 4000
FLY-P008-0310	310	294	389	5,7	HP - 4000
FLY-P008-0371	371	355	450	6,8	HP - 4000
FLY-P008-0432	432	416	511	7,8	HP - 4000
FLY-P008-0493	493	477	572	8,9	HP - 4000
FLY-P008-0554	554	538	633	9,9	HP - 4000

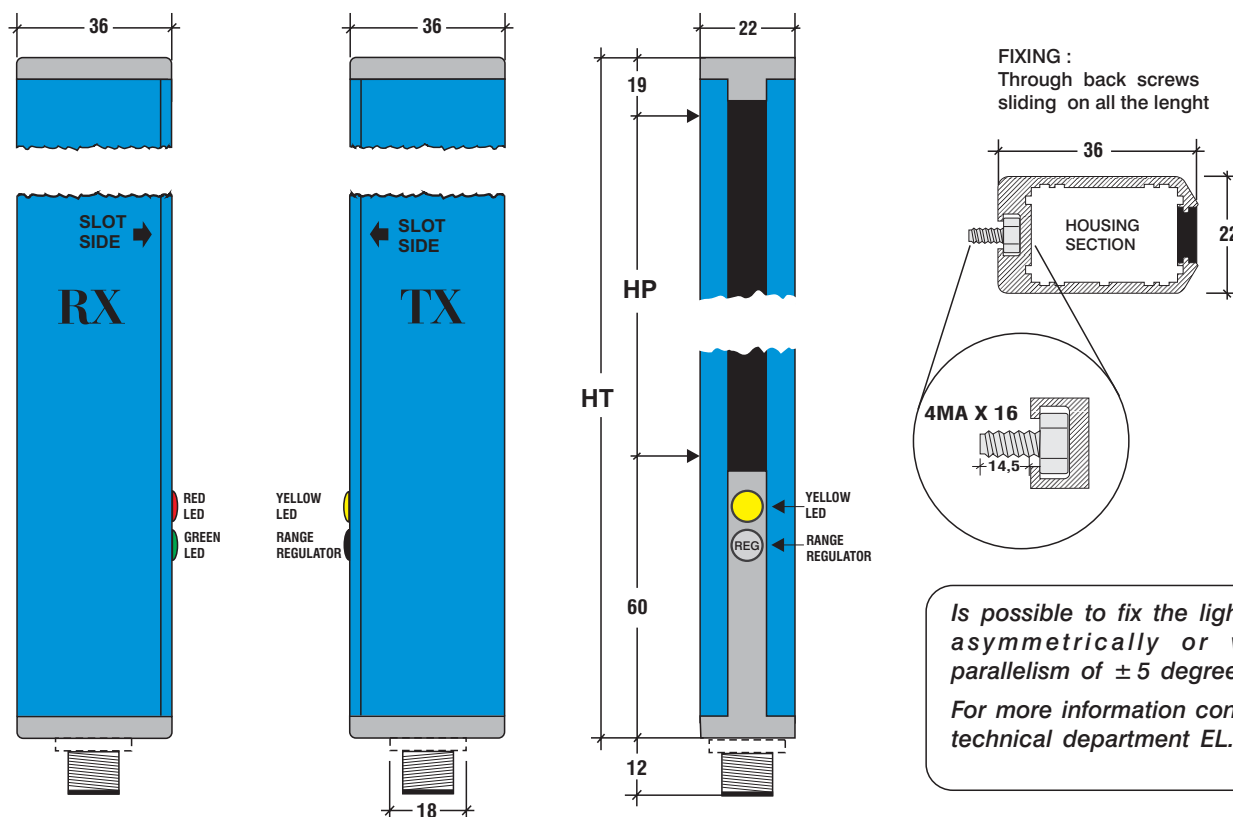
(*) The object to be detected must occlude the curtain for a time equal to or greater than the response time

Power Supply	24Vdc \pm 10% (You may use the same power for both units TX/RX) Protection against reverse polarity
Absorption TX - RX Units	130 mA max exclusive of load
Outputs	2 PNP static outputs + 1 Light ON + 1 Dark ON max 150 mA
Output Protection	Short circuit and overload (In case of short circuit and / or remove the overload power for at least 3 seconds)
Operating Mode	Fast up to 500 pcs / min - Ultra fast up to 2000 pcs / min (depending on the length of the object to be detected)
Time Pulse Output	Fast minimum 100 ms - Ultra fast minimum 15 ms
LED Signallings	<p>TX Unit</p> <ul style="list-style-type: none"> - Yellow Led ON = Power Supply <p>RX Unit</p> <ul style="list-style-type: none"> - Green Led ON = Curtain free - Red Led ON = Curtain occluded - Green and Red Led ON = Overload / Short circuit
Working Temperature	0 / +50 °C
TX - RX Connection	Nr. 2 Connectors M12 5 poles female to wire driving included in the supply
Synchronism	Optical
Housing	Polished Aluminium BLU RAL5015
Housing Section	22 x 36 mm
Protection Degree	IP54 (option IP67 - IP69K)
Fixing	Through back screws sliding on the length 4MA x 16

PRECAUTIONS

- Avoid installations near sources of light very intense, especially in proximity of the receiving unit.
- The presence of strong electromagnetic interference could influence the correct functioning of the device.
- Reflective surfaces placed in the proximity of the device can introduce passive reflections that can affect the detection of the object inside the controlled area.
- If you need to install more devices should be avoided adjacent to the emitter of a device is interfering with the receiver of another device.

CONNECTION ELECTRIC DIAGRAM




MOUNTING - ALIGNMENT

Install the two units TX (transmitter) and RX (receiver) to the operating distance of work indicated on the data written on the labels so that they are as parallel as possible.

RECALIBRATION

In case you need to change the working distance between the TX and RX perform the following procedure : turn the trimmer cap under the "Range Regulator" counter-clockwise until the full scale and give power to both units simultaneously TX and RX.

On the TX light will be yellow and the red light on the RX.

Turn the trimmer slowly clockwise until it causes the drive RX switching the lamp from RED to GREEN.

This operation must be done at least twice.

The final position of the trimmer will be the closest point to the stable release of the switching GREEN-RED of the lights.

We recommend that you perform this procedure after selecting the operating mode FAST or ULTRAFAST or after any change of operating mode.

HOW TO ORDER

Product Code

Distances

FLY-P008-0554 - - - -

Working distance in mm.

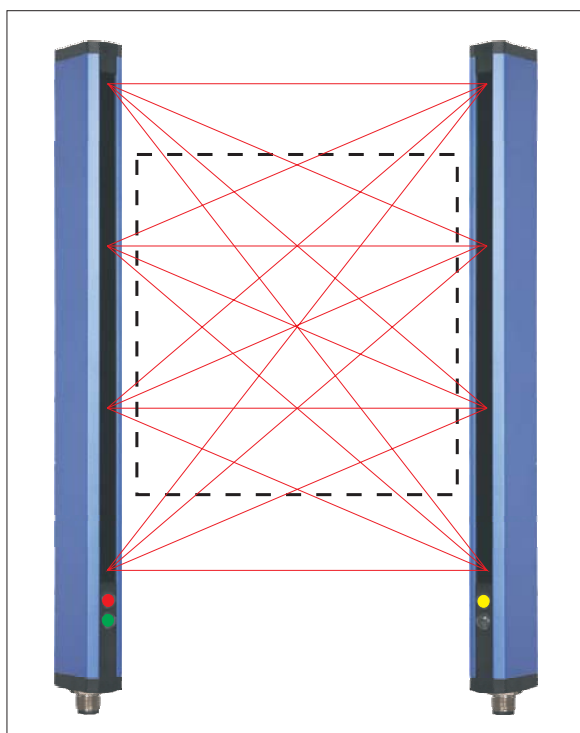
To be indicated on the order. The light curtain will be supplied pre calibrated for **an immediate adjustment**

Example : FLY-P008-0554 - 1000



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Resolution 16 mm

Controlled Height 66 ÷ 1164 mm

Controlled Range HP ÷ 4000 mm

Outputs 2 PNP

Directives 2004/108/EC - 2006/95/EC

Light Curtain for the detection at infrared rays for the control - automation - objects presence control on areas - object passage detection on a conveyor - pieces counting - etc ..

Light Curtain FLY-P016 are NOT safety devices and must not be used for safety control of the machines on which they are installed.

CONTROLLED AREAS HEIGHT

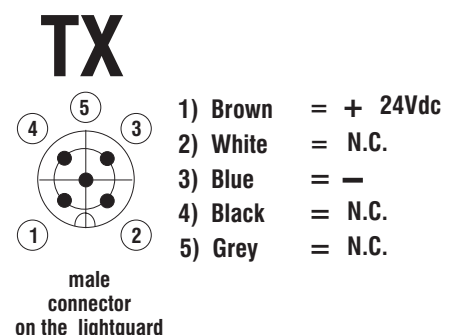
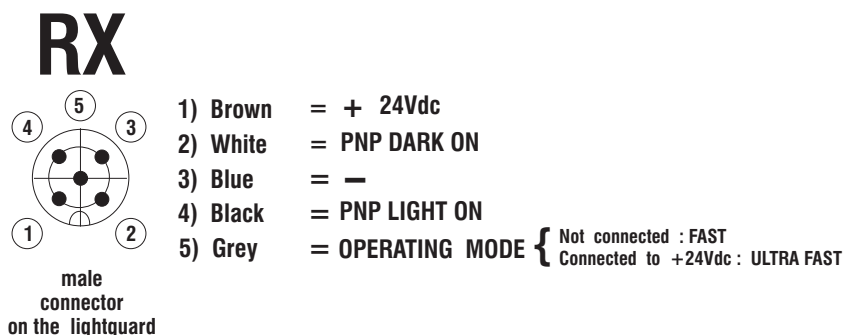
Product Code	Controlled Height Presence Detection	HP mm Counting (hatch area recommended)	Total Height HT mm	Response Time ms (*)	Working Distance controlled min/max mm
FLY-P016-0066	66	34	145	1,0	HP - 4000
FLY-P016-0127	127	95	206	1,5	HP - 4000
FLY-P016-0188	188	156	267	2,0	HP - 4000
FLY-P016-0249	249	217	328	2,6	HP - 4000
FLY-P016-0310	310	278	389	3,1	HP - 4000
FLY-P016-0371	371	339	450	3,6	HP - 4000
FLY-P016-0432	432	400	511	4,1	HP - 4000
FLY-P016-0493	493	461	572	4,7	HP - 4000
FLY-P016-0554	554	522	633	5,2	HP - 4000
FLY-P016-0615	615	583	694	5,7	HP - 4000
FLY-P016-0676	676	644	755	6,2	HP - 4000
FLY-P016-0737	737	705	816	6,8	HP - 4000
FLY-P016-0798	798	766	877	7,3	HP - 4000
FLY-P016-0859	859	827	938	7,8	HP - 4000
FLY-P016-0920	920	888	999	8,4	HP - 4000
FLY-P016-0981	981	949	1060	8,9	HP - 4000
FLY-P016-1042	1042	1010	1121	9,4	HP - 4000
FLY-P016-1103	1103	1071	1182	9,9	HP - 4000
FLY-P016-1164	1164	1132	1243	10,5	HP - 4000

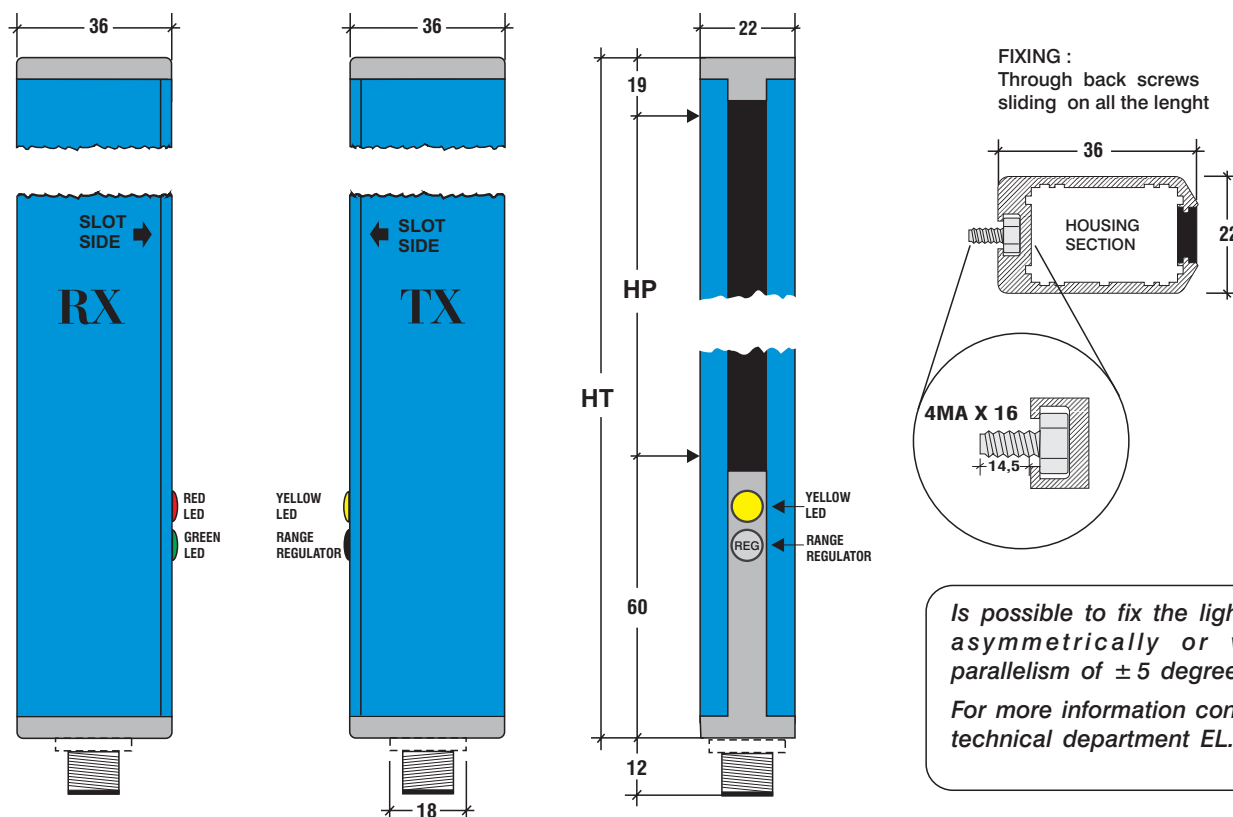
(*) The object to be detected must occlude the curtain for a time equal to or greater than the response time

Power Supply	24Vdc \pm 10% (You may use the same power for both units TX/RX) Protection against reverse polarity
Absorption TX - RX Units	130 mA max exclusive of load
Outputs	2 PNP static outputs + 1 Light ON + 1 Dark ON max 150 mA
Output Protection	Short circuit and overload (In case of short circuit and / or remove the overload power for at least 3 seconds)
Operating Mode	Fast up to 500 pcs / min - Ultra fast up to 2000 pcs / min (depending on the length of the object to be detected)
Time Pulse Output	Fast minimum 100 ms - Ultra fast minimum 15 ms
LED Signallings	<p>TX Unit</p> <ul style="list-style-type: none"> - Yellow Led ON = Power Supply <p>RX Unit</p> <ul style="list-style-type: none"> - Green Led ON = Curtain free - Red Led ON = Curtain occluded - Green and Red Led ON = Overload / Short circuit
Working Temperature	0 / +50 °C
TX - RX Connection	Nr. 2 Connectors M12 5 poles female to wire driving included in the supply
Synchronism	Optical
Housing	Polished Aluminium BLU RAL5015
Housing Section	22 x 36 mm
Protection Degree	IP54 (option IP67 - IP69K)
Fixing	Through back screws sliding on the length 4MA x 16

PRECAUTIONS

- Avoid installations near sources of light very intense, especially in proximity of the receiving unit.
- The presence of strong electromagnetic interference could influence the correct functioning of the device.
- Reflective surfaces placed in the proximity of the device can introduce passive reflections that can affect the detection of the object inside the controlled area.
- If you need to install more devices should be avoided adjacent to the emitter of a device is interfering with the receiver of another device.

CONNECTION ELECTRIC DIAGRAM




MOUNTING - ALIGNMENT

Install the two units TX (transmitter) and RX (receiver) to the operating distance of work indicated on the data written on the labels so that they are as parallel as possible.

RECALIBRATION

In case you need to change the working distance between the TX and RX perform the following procedure : turn the trimmer cap under the "Range Regulator" counter-clockwise until the full scale and give power to both units simultaneously TX and RX.

On the TX light will be yellow and the red light on the RX.

Turn the trimmer slowly clockwise until it causes the drive RX switching the lamp from RED to GREEN.

This operation must be done at least twice.

The final position of the trimmer will be the closest point to the stable release of the switching GREEN-RED of the lights.

We recommend that you perform this procedure after selecting the operating mode FAST or ULTRAFAST or after any change of operating mode.

HOW TO ORDER

Product Code

Distances

FLY-P016-1164 - - - -

Working distance in mm.

To be indicated on the order. The light curtain will be supplied pre calibrated for **an immediate adjustment**

Example : FLY-P016-1164 - 1000

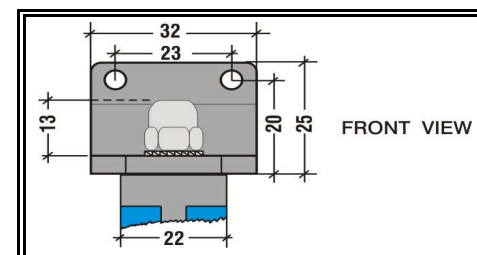
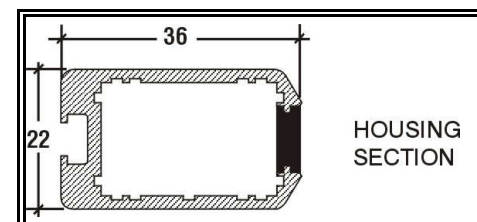


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QUICK GUIDE TO THE CHOICE OF MODEL "FOX PXXX"

Model	FOX P040		FOX P080		FOX P120		FOX P160	
Number rays	Height (HP) (HT)		Height (HP) (HT)		Height (HP) (HT)		Height (HP) (HT)	
2 x 2					240	405	320	485
3 x 3			320	485	480	645	640	805
4 x 4	240	405	480	645	720	885	960	1125
5 x 5	320	485	640	805	960	1125	1280	1445
6 x 6	400	565	800	965	1200	1365	1600	1765
7 x 7	480	645	960	1125	1440	1605	1920	2085
8 x 8	560	725	1120	1285	1680	1845		
9 x 9	640	805	1280	1445	1920	2085		
10 x 10	720	885	1440	1605				
11 x 11	800	965	1600	1765				
12 x 12	880	1045	1760	1925				
13 x 13	960	1125	1920	2085				
14 x 14	1040	1205						
15 x 15	1120	1285						
16 x 16	1200	1365						
17 x 17	1280	1445						
18 x 18	1360	1525						
19 x 19	1440	1605						
20 x 20	1520	1685						
21 x 21	1600	1765						
22 x 22	1680	1845						
23 x 23	1760	1925						
24 x 24	1840	2005						
25 x 25	1920	2085						



HP= Protected Height

HT= Total Height including orientable support brackets (SMO)

PXXX= Resolution of the light curtain (EX: P080= Resolution 80mm)

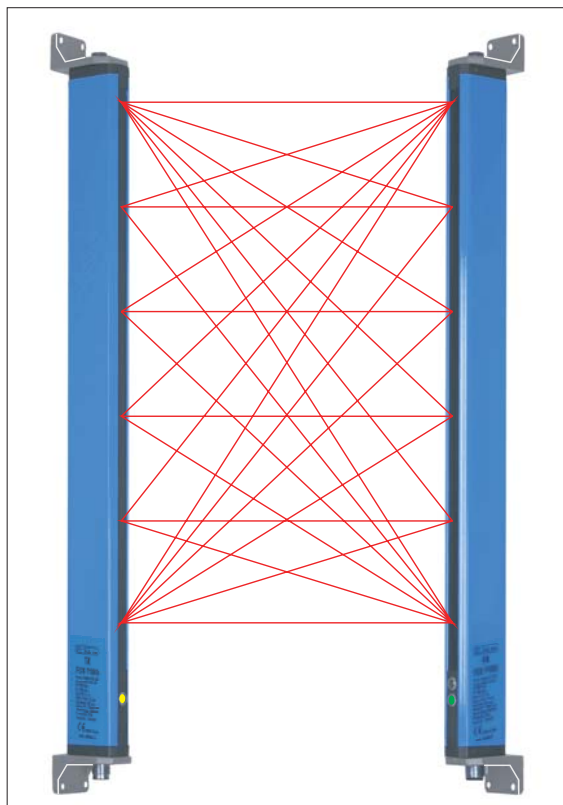
Note: In the columns all the important dimensions for the various sizes are reported. For the hole interaxes 10 mm are to be deducted from the total eight. In the drawings are indicated the quote for fixing holes

Note: On request we can provide other resolutions



Via Pergolesi 30 - 20851 LISSONE (MB)
 TEL 039/24.57.587 - FAX 039/46.10.56
 e-mail elind@betam.it - internet www.elindco.it

Lissone 10 January 2013



Resolution **40 mm**

Protected Height **240 ÷ 1920 mm**

Range **HP ÷ 30 metri**

Output **1 switch - ON/OFF**

Directives **2004/108/EC - 2006/95/EC**

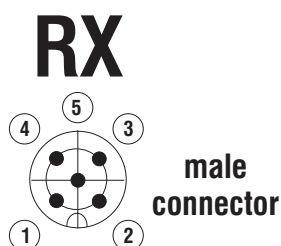
Light Curtain for the detection at infrared rays for the control - automation - objects presence control on areas - object passage detection on a conveyor - pieces counting - etc ..

Start/Restart : automatic restart of the logic state of the device after an intervention and at its powering on. It is supplied in series with a connector output M12 female 5poles to wire driving and with orientable support brackets (SMO)

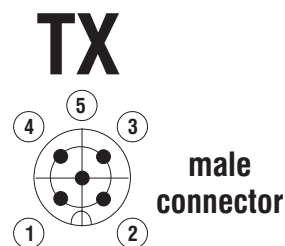
PROTECTED AREAS HEIGHT

Product Code	Protected Height HP mm	Total Height H mm	Response time ms	Number of controlled rays
FOX-P040-0240	240	405	20	4x4
FOX-P040-0320	320	485	23	5x5
FOX-P040-0400	400	565	25	6x6
FOX-P040-0480	480	645	28	7x7
FOX-P040-0560	560	725	30	8x8
FOX-P040-0640	640	805	33	9x9
FOX-P040-0720	720	885	35	10x10
FOX-P040-0800	800	965	38	11x11
FOX-P040-0880	880	1045	40	12x12
FOX-P040-0960	960	1125	43	13x13
FOX-P040-1040	1040	1205	45	14x14
FOX-P040-1120	1120	1285	48	15x15
FOX-P040-1200	1200	1365	50	16x16
FOX-P040-1280	1280	1445	53	17x17
FOX-P040-1360	1360	1525	55	18x18
FOX-P040-1440	1440	1605	58	19x19
FOX-P040-1520	1520	1685	60	20x20
FOX-P040-1600	1600	1765	63	21x21
FOX-P040-1680	1680	1845	65	22x22
FOX-P040-1760	1760	1925	68	23x23
FOX-P040-1840	1840	2005	70	24x24
FOX-P040-1920	1920	2085	73	25x25

Safety Category	PRESENCE - DETECTION
Power Supply	24Vdc \pm 10%
Absorption TX Unit	80 mA max
Absorption RX Unit	70 mA max
Output	1 switch SW1 (ON/OFF) free from potential 0,75 Adc/ac @ 40Vdc/ac
Output Protection	Short circuit and overcharge through self restoring fuses. After an overcharge or shortcircuit it is necessary to power off and wait some seconds before the normal working restart
LED Signallings	TX Unit - Yellow Led = Power Supply RX Unit - Green Led = Active Protection - Red Led = Alarm
Housing	Polished aluminium BLU RAL 5015
Housing Section	22 x 36 mm
Protection Degree	IP54 (option IP67 - IP69K)
Working Temperature	0 / +55 °C
RX Connection	Connector M12 female 5 poles to wire driving included in the supply
TX Connection	Connector M12 female 5 poles to wire driving included in the supply
Fixing	SMO (orientable support brackets)

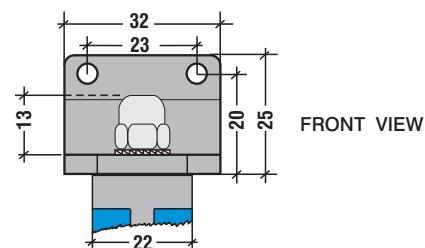
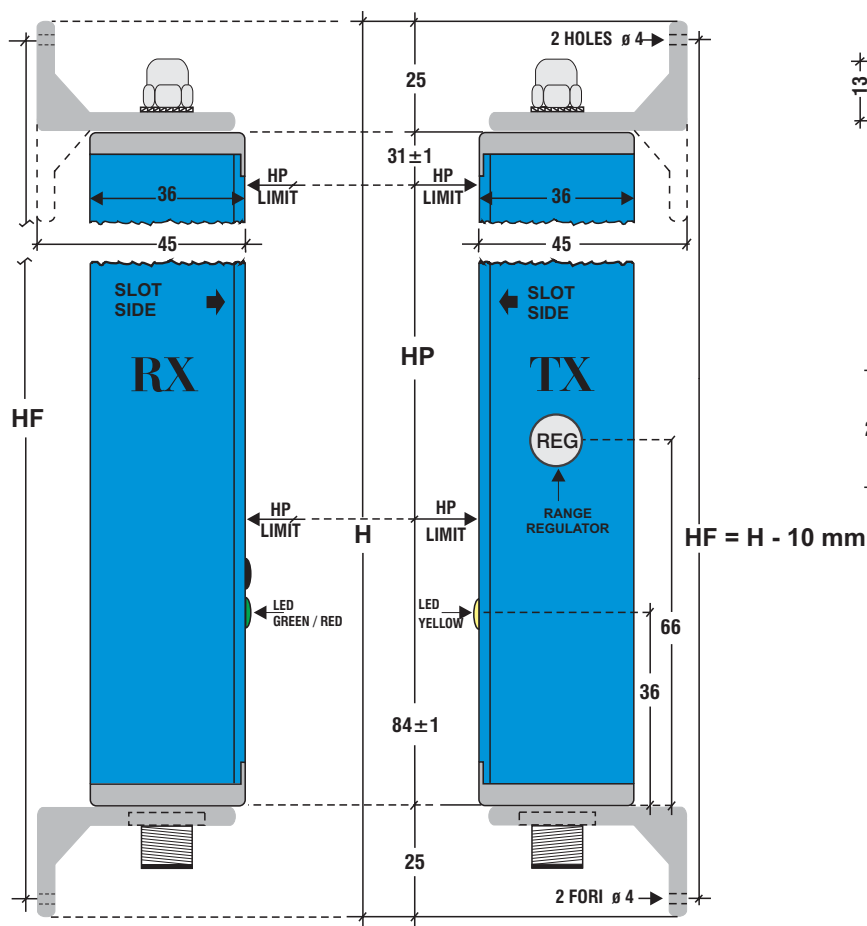
CONNECTION ELECTRIC DIAGRAM


- 1) Brown = + 24Vdc
- 2) White = SW1
- 3) Blue = -
- 4) Black =
- 5) Grey = N.C.
- Shield =

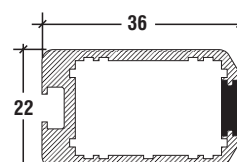


- 1) Brown = + 24Vdc
- 2) White = N.C.
- 3) Blue = -
- 4) Black = N.C.
- 5) Grey = N.C.
- Shield =

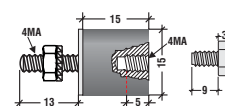
SIDE VIEW



FRONT VIEW



HOUSING SECTION



SUPPEL70 =
Elastic supports
antivibrating sliding
on all the lenght
(OPTIONS)

OPTIONS (°°)

OUTPUT CABLE	Output with direct cable lenght 5 meters
SUPPEL 70	Supports for the direct mounting of the profile (not orientable)
CB60 IP67	IP67 protection
CB60 IP69K	IP69K protection

ACCESSORIES

SPV100	Mirrors at V for enclosures
SPV100 PLUS	Mirrors at V UNBREAKABLE for enclosures
CON 5	Connector M12 female 5 poles to wire driving included in the supply
CON 5	Connector M12 female 5 poles to wire driving included in the supply

HOW TO ORDER

Product Code	Distance	Mounting	OPTIONS (°°)	Maximum Range between TX and RX
FOX-P040-0560	-	- SMO	-	NR = HP ... 6 meters MR = 6 ... 16 meters HR = 16 ... 30 meters

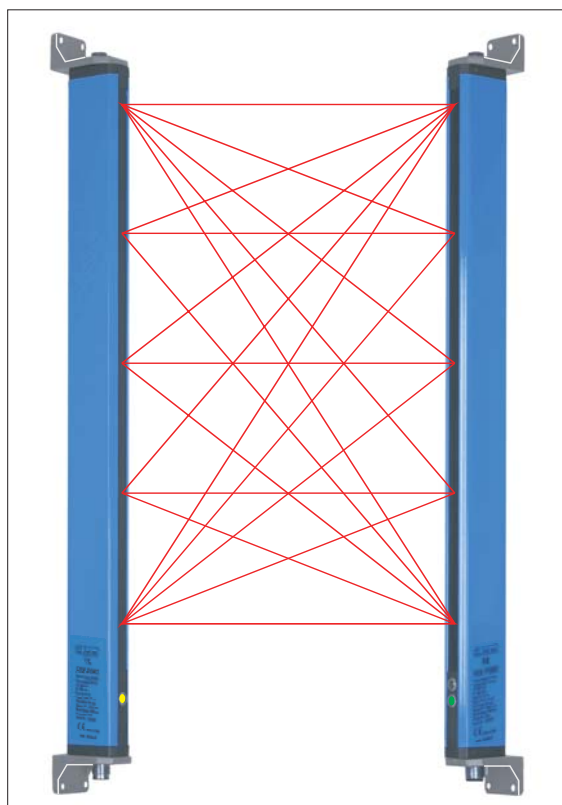
Working distance in mm.

To be indicated on the order. The Light Curtain will be supplied pre-calibrated for an **immediate adjustment**

Example : FOX-P040-0560 - 1000 - NR - SMO

FOX P080

Light Curtain Presence - Detection



Resolution 80 mm

Protected Height 320 ÷ 1920 mm

Range HP ÷ 30 metri

Output 1 switch - ON/OFF

Directives 2004/108/EC - 2006/95/EC

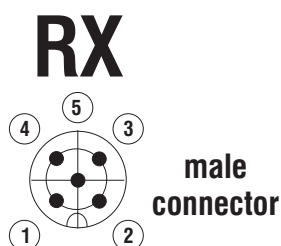
Light Curtain for the detection at infrared rays for the control - automation - objects presence control on areas - object passage detection on a conveyor - pieces counting - etc ..

Start/Restart : automatic restart of the logic state of the device after an intervention and at its powering on. It is supplied in series with a connector output M12 female 5poles to wire driving and with orientable support brackets (SMO)

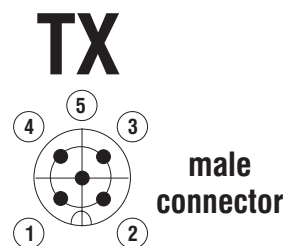
PROTECTED AREAS HEIGHT

Product Code	Protected Height HP mm	Total Height H mm	Response time ms	Number of controlled rays
FOX-P080-0320	320	485	18	3x3
FOX-P080-0480	480	645	20	4x4
FOX-P080-0640	640	805	23	5x5
FOX-P080-0800	800	965	25	6x6
FOX-P080-0960	960	1125	28	7x7
FOX-P080-1120	1120	1285	30	8x8
FOX-P080-1280	1280	1445	33	9x9
FOX-P080-1440	1440	1605	35	10x10
FOX-P080-1600	1600	1765	38	11x11
FOX-P080-1760	1760	1925	40	12x12
FOX-P080-1920	1920	2085	43	13x13

Safety Category	PRESENCE - DETECTION
Power Supply	24Vdc \pm 10%
Absorption TX Unit	80 mA max
Absorption RX Unit	70 mA max
Output	1 switch SW1 (ON/OFF) free from potential 0,75 Adc/ac @ 40Vdc/ac
Output Protection	Short circuit and overcharge through self restoring fuses. After an overcharge or shortcircuit it is necessary to power off and wait some seconds before the normal working restart
LED Signallings	TX Unit - Yellow Led = Power Supply RX Unit - Green Led = Active Protection - Red Led = Alarm
Housing	Polished aluminium BLU RAL 5015
Housing Section	22 x 36 mm
Protection Degree	IP54 (option IP67 - IP69K)
Working Temperature	0 / +55 °C
RX Connection	Connector M12 female 5 poles to wire driving included in the supply
TX Connection	Connector M12 female 5 poles to wire driving included in the supply
Fixing	SMO (orientable support brackets)

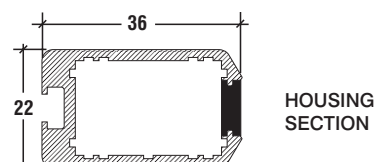
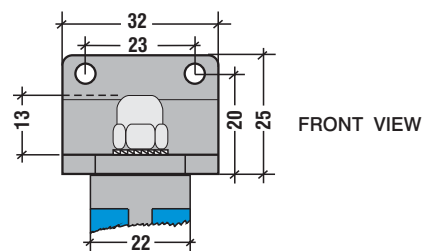
CONNECTION ELECTRIC DIAGRAM


- 1) Brown = + 24Vdc
- 2) White = SW1
- 3) Blue = -
- 4) Black =
- 5) Grey = N.C.
- Shield =

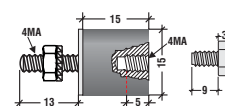


- 1) Brown = + 24Vdc
- 2) White = N.C.
- 3) Blue = -
- 4) Black = N.C.
- 5) Grey = N.C.
- Shield =

Technical drawing of the RX and TX modules showing dimensions and labels. The RX module (left) has a width of 45, a top section width of 36, and a height of HF. The TX module (right) has a width of 45, a top section width of 36, and a height of H. Both modules have a top section with 2 HOLES $\varnothing 4$ and a bottom section with 2 FORI $\varnothing 4$. The RX module has a SLOT SIDE and an LED GREEN / RED. The TX module has a SLOT SIDE, a REG (RANGE REGULATOR), and an LED YELLOW. Dimensions include 25, 31 ± 1 , 36, 45, 66, 84 ± 1 , and HP LIMIT.



$$HF = H - 10 \text{ mm}$$



SUPPEL70 =
Elastic supports
antivibrating sliding
on all the lenght
(OPTIONS)

OUTPUT CABLE	Output with direct cable lenght 5 meters
SUPPEL 70	Supports for the direct mounting of the profile (not orientable)
CB60 IP67	IP67 protection
CB60 IP69K	IP69K protection

SPV100	Mirrors at V for enclosures
SPV100 PLUS	Mirrors at V UNBREAKBLE for enclosures
CON 5	Connector M12 female 5 poles to wire driving included in the supply
CON 5	Connector M12 female 5 poles to wire driving included in the supply

Product Code	Distance	Mounting	OPTIONS (°)	Maximum Range between TX and RX
FOX-P080-0800	- - - - -	SMO	- - - - -	NR = HP ... 6 meters MR = 6 ... 16 meters HR = 16 ... 30 meters

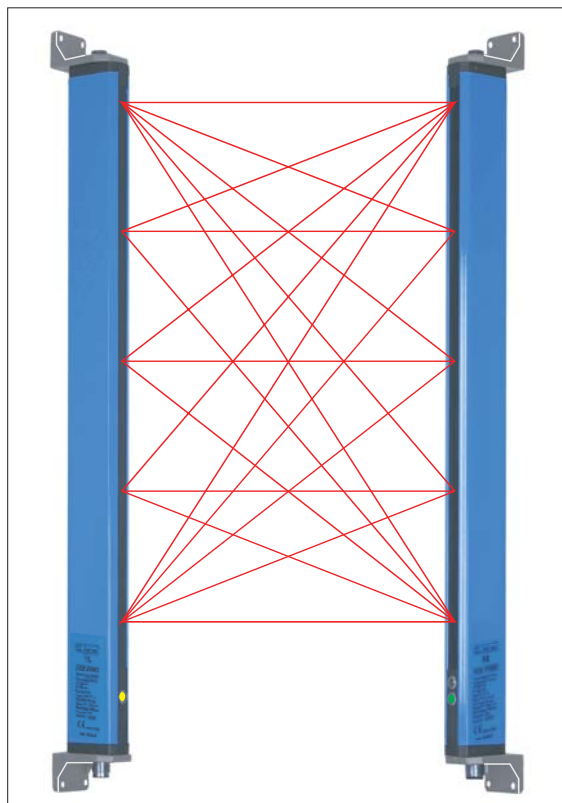
To be indicated on the order. The Light Curtain will be supplied pre-calibrated for an **immediate adjustment**

EL Ind. co.

DECEMBER 2012

FOX P120

Light Curtain Presence - Detection



Resolution 120 mm

Protected Height 240 ÷ 1920 mm

Range HP ÷ 30 metri

Output 1 switch - ON/OFF

Directives 2004/108/EC - 2006/95/EC

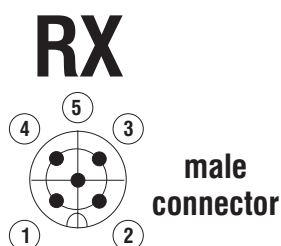
Light Curtain for the detection at infrared rays for the control - automation - objects presence control on areas - object passage detection on a conveyor - pieces counting - etc ..

Start/Restart : automatic restart of the logic state of the device after an intervention and at its powering on. It is supplied in series with a connector output M12 female 5poles to wire driving and with orientable support brackets (SMO)

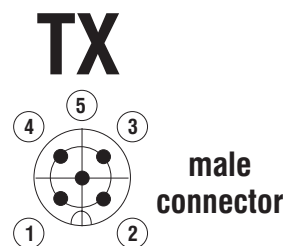
PROTECTED AREAS HEIGHT

Product Code	Protected Height HP mm	Total Height H mm	Response time ms	Number of controlled rays
FOX-P120-0240	240	405	15	2x2
FOX-P120-0480	480	645	18	3x3
FOX-P120-0720	720	885	20	4x4
FOX-P120-0960	960	1125	23	5x5
FOX-P120-1200	1200	1365	25	6x6
FOX-P120-1440	1440	1605	28	7x7
FOX-P120-1680	1680	1845	30	8x8
FOX-P120-1920	1920	2085	33	9x9

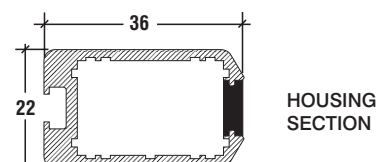
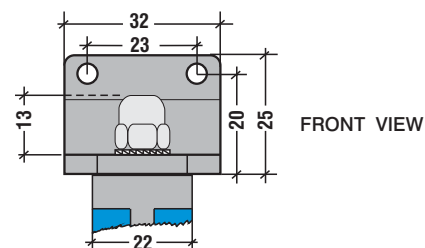
Safety Category	PRESENCE - DETECTION
Power Supply	24Vdc \pm 10%
Absorption TX Unit	80 mA max
Absorption RX Unit	70 mA max
Output	1 switch SW1 (ON/OFF) free from potential 0,75 Adc/ac @ 40Vdc/ac
Output Protection	Short circuit and overcharge through self restoring fuses. After an overcharge or shortcircuit it is necessary to power off and wait some seconds before the normal working restart
LED Signallings	TX Unit - Yellow Led = Power Supply RX Unit - Green Led = Active Protection - Red Led = Alarm
Housing	Polished aluminium BLU RAL 5015
Housing Section	22 x 36 mm
Protection Degree	IP54 (option IP67 - IP69K)
Working Temperature	0 / +55 °C
RX Connection	Connector M12 female 5 poles to wire driving included in the supply
TX Connection	Connector M12 female 5 poles to wire driving included in the supply
Fixing	SMO (orientable support brackets)

CONNECTION ELECTRIC DIAGRAM


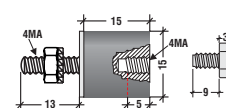
- 1) Brown = + 24Vdc
- 2) White =
- 3) Blue = —
- 4) Black = —
- 5) Grey = N.C.
- Shield =



- 1) Brown = + 24Vdc
- 2) White = N.C.
- 3) Blue = —
- 4) Black = N.C.
- 5) Grey = N.C.
- Shield =



$$HF = H - 10 \text{ mm}$$



SUPPEL70 =
Elastic supports
antivibrating sliding
on all the lenght
(OPTIONS)

OUTPUT CABLE	Output with direct cable lenght 5 meters
SUPPEL 70	Supports for the direct mounting of the profile (not orientable)
CB60 IP67	IP67 protection
CB60 IP69K	IP69K protection

SPV100	Mirrors at V for enclosures
SPV100 PLUS	Mirrors at V UNBREAKABLE for enclosures
CON 5	Connector M12 female 5 poles to wire driving included in the supply
CON 5	Connector M12 female 5 poles to wire driving included in the supply

Product Code	Distance	Mounting	OPTIONS (°°)	Maximum Range between TX and RX
FOX-P120-0480	- - - - -	- SMO	- - - - -	NR = HP ... 6 meters MR = 6 ... 16 meters HR = 16 ... 30 meters

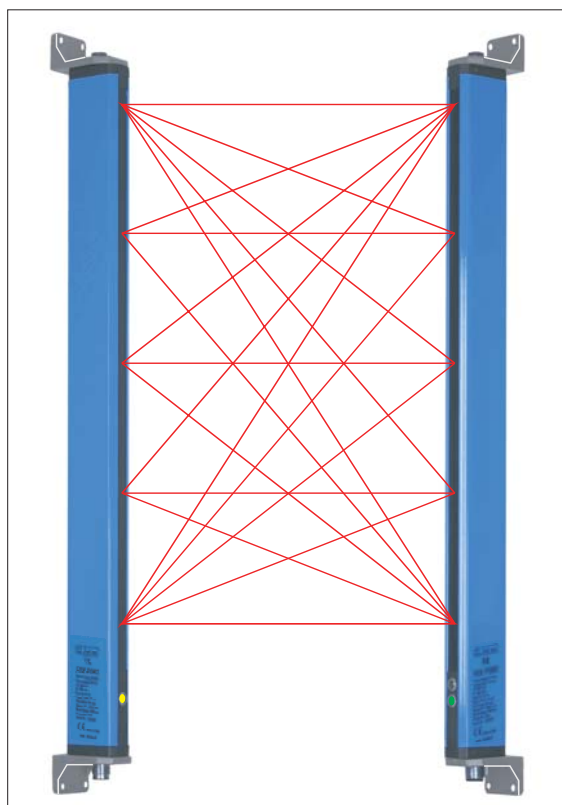
To be indicated on the order. The Light Curtain will be supplied pre-calibrated for an **immediate adjustment**

EL Ind. co.

DECEMBER 2012

FOX P160

Light Curtain Presence - Detection



Resolution 160 mm

Protected Height 320 ÷ 1920 mm

Range HP ÷ 30 metri

Output 1 switch - ON/OFF

Directives 2004/108/EC - 2006/95/EC

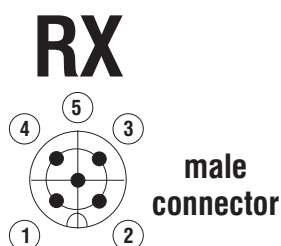
Light Curtain for the detection at infrared rays for the control - automation - objects presence control on areas - object passage detection on a conveyor - pieces counting - etc ..

Start/Restart : automatic restart of the logic state of the device after an intervention and at its powering on. It is supplied in series with a connector output M12 female 5poles to wire driving and with orientable support brackets (SMO)

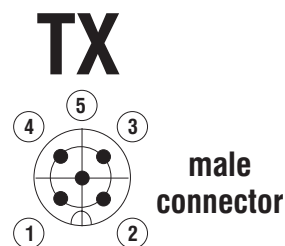
PROTECTED AREAS HEIGHT

Product Code	Protected Height HP mm	Total Height H mm	Response time ms	Number of controlled rays
FOX-P160-0320	320	485	15	2x2
FOX-P160-0640	640	805	18	3x3
FOX-P160-0960	960	1125	20	4x4
FOX-P160-1280	1280	1445	23	5x5
FOX-P160-1600	1600	1765	25	6x6
FOX-P160-1920	1920	2085	28	7x7

Safety Category	PRESENCE - DETECTION
Power Supply	24Vdc \pm 10%
Absorption TX Unit	80 mA max
Absorption RX Unit	70 mA max
Output	1 switch SW1 (ON/OFF) free from potential 0,75 Adc/ac @ 40Vdc/ac
Output Protection	Short circuit and overcharge through self restoring fuses. After an overcharge or shortcircuit it is necessary to power off and wait some seconds before the normal working restart
LED Signallings	TX Unit - Yellow Led = Power Supply RX Unit - Green Led = Active Protection - Red Led = Alarm
Housing	Polished aluminium BLU RAL 5015
Housing Section	22 x 36 mm
Protection Degree	IP54 (option IP67 - IP69K)
Working Temperature	0 / +55 °C
RX Connection	Connector M12 female 5 poles to wire driving included in the supply
TX Connection	Connector M12 female 5 poles to wire driving included in the supply
Fixing	SMO (orientable support brackets)

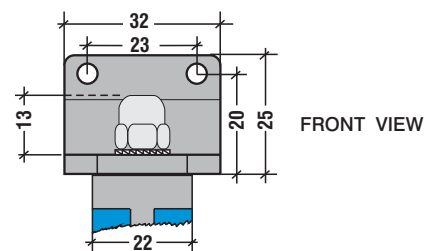
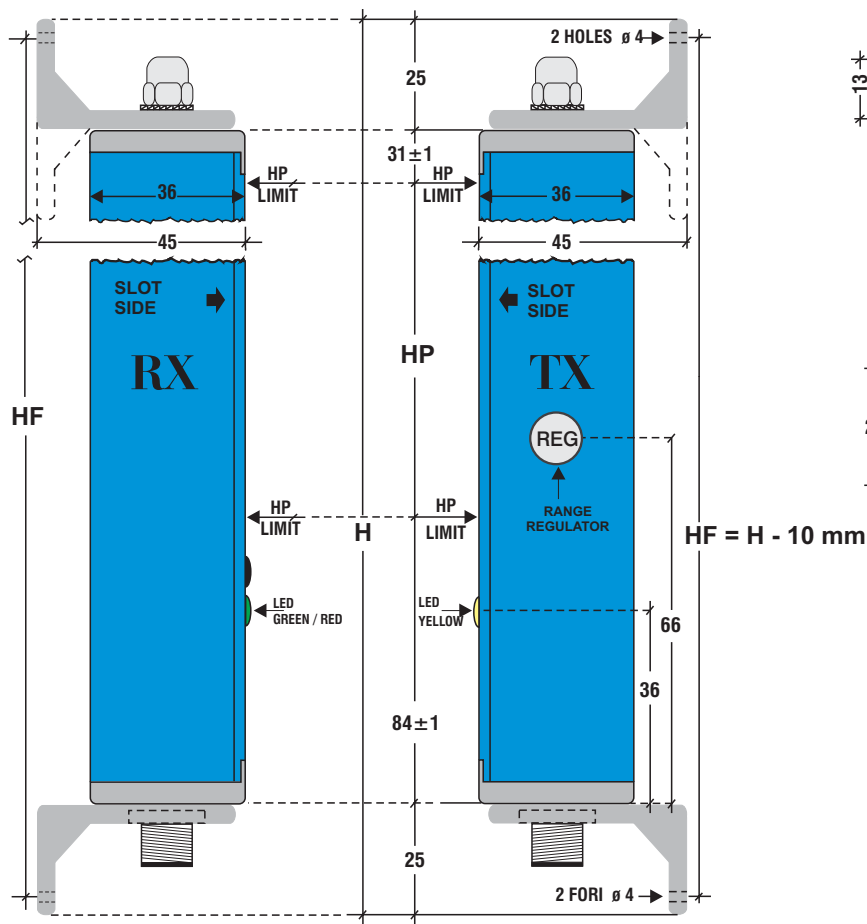
CONNECTION ELECTRIC DIAGRAM


- 1) Brown = + 24Vdc
- 2) White = SW1
- 3) Blue = -
- 4) Black =
- 5) Grey = N.C.
- Shield =

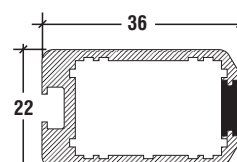


- 1) Brown = + 24Vdc
- 2) White = N.C.
- 3) Blue = -
- 4) Black = N.C.
- 5) Grey = N.C.
- Shield =

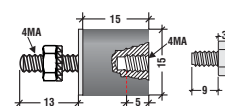
SIDE VIEW



FRONT VIEW



HOUSING SECTION



SUPPEL70 = Elastic supports antivibrating sliding on all the lenght (OPTIONS)

OPTIONS (°°)

OUTPUT CABLE	Output with direct cable lenght 5 meters
SUPPEL 70	Supports for the direct mounting of the profile (not orientable)
CB60 IP67	IP67 protection
CB60 IP69K	IP69K protection

ACCESSORIES

SPV100	Mirrors at V for enclosures
SPV100 PLUS	Mirrors at V UNBREAKABLE for enclosures
CON 5	Connector M12 female 5 poles to wire drwing included in the supply
CON 5	Connector M12 female 5 poles to wire drwing included in the supply

HOW TO ORDER

Product Code	Distance	Mounting	OPTIONS (°°)	Maximum Range between TX and RX
FOX-P160-0640	- - - - -	SMO	- - - - -	NR = HP ... 6 meters MR = 6 ... 16 meters HR = 16 ... 30 meters

Working distance in mm.

To be indicated on the order. The Light Curtain will be supplied pre-calibrated for an **immediate adjustment**

Example : FOX-P160-0640 - 1000 - NR - SMO

NOTE

www.elindco.it



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