The Red Beam security safety light curtains are available for Safety Category 2 and 4, and are divided in the product lines BASIC and ADVANCED.

Basic Line

The Basic line Red Beam safety light curtains have an embedded control unit with 24 Vcc relay output, or 0 Vcc upon request, and with 1A normally open contact.
They are equipped with automatic reset and control lights indicating the operational status.

Advanced Line

The Advanced line Red Beam safety light curtains have a programmable reset, that can be manual, semi automatic or automatic.
The control block positioned on the safety light curtain consists of an alphanumeric display, a graduated scale, an alignment check led and buttons to program the safety light curtain.
This type of safety light curtain has the muting, the fixed/mobile blanking and the feedback (EDM) functions embedded.

Operating Modes

With *manual reset*, the relay within the safety light curtain is activated using an external button.

With s*emi automatic reset*, the safety light curtain has to be started manually after the power on, but each following reset cycle will be automatic.

With a*utomatic reset*, the relay within the safety light curtain activates without the need of external commands.

Muting Function

The muting function temporarily and automatically disables the safety light curtain, in a way that is safe in relation to the machine cycle. This is an essential function when the normal operating cycle of the machinery envisages the transit of some machine parts or workpiece through the safety light curtain, without stopping the machine. This function is not available in the Basic line.

Blanking Function

The blanking function allows to disable one or more optical elements, in order to permit the entrance of objects with various size. This allows the operator not to bypass the device and to preserve the safety conditions.
This function is useful when a workpiece or a machine part has to intercept the photoelectrical field of the safety light curtain. This function is only available in the Advanced line.

Override Function

The override function has the purpose of allowing the removal of objects that are intercepting the protected passage. This may happen after the machine stopped when the object passed through the passage. The two override signals can be activated by a designated selector that provides the two required levels or by an impulse that activates the override status.
This function is only available on “T, L ,I” models.

Feedback Function (EDM)

The feedback function (better known as EDM) has the purpose of checking the status of the contacts of the external contactors the safety light curtain is connected to, blocking the system if one or more of them have short-circuited. This function is not available in the Basic line.

ADVANVCED LINE

MUTING:
light signal showing if the muting / blanking function is active and helps the safety light curtain to align each other.

BREAK:
it shows if there are interrupted beams and if we are in normal environmental conditions.

SAFE:
it shows if the receiver is aligned and properly working.

F1 -F2:
function buttons accessible through password.

GRADUATED SCALE:
it shows the area where the beam has been interrupted and the beam status during the safety light curtain operation.

ALPHANUMERIC DISPLAY:
together with the other signals, it shows the safety light curtain status.

BASIC LINE

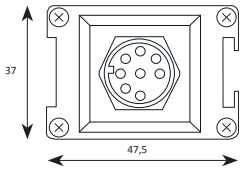
BASIC / M LINE

OPTICAL ELEMENT

BREAK: it shows if there are interrupted beams and if we are in normal environment conditions

MUTING: complete safety light curtain suspension

SAFE: it shows if the receiver is working properly



M 12 connector with 8 pins

FEATURES	BASIC	ADVANCED	M	V
Integrated 24 Vcc relay	X			
Integrated relay with isolated contact		X	X	
PNP transistor output				X
Automatic reset	X	X	X	X
Semi-automatic reset		X		
Manual reset		X	X	X
Algnment led	X	X	X	X
Alphanumeric display		X		X
Graduated scale		X		X
Function button		X		X
Muting		X	X	X
Blanking		X		
Optical synchronization	X	X	X	X
Override				X
Feedback		X		X

Advanced Line

Safety Category 2

Working range: HTB3 : 0,1 - 5 mt HTBL3 : 5 - 17 mt
Response time: < 30ms
Output: 1 relay output not in voltage NO - I max 1A dc/30V procted in current - FEEDBACK (EDM)
Input: RESTART - MUTING - TEST
Power source: + 24 Vdc ± 20%
Power consumption: 0,4 A max
Working temperature: - 10° + 60° C
Enclosure rating: IP 65
Connection: Circular connector M23 with 16 pins and M12 with 5 pins
Reset: automatic, manual, semi automatic
Alignement led
Buttons to program the safety light curtain

RESOLUTION	RANGE		HEIGHT		NR.
	0,1 - 5 mt	5 - 17 mt	USEFUL	TOTAL	BEAMS
14 mm	HTB3-1514	HTBL3-1514	150	270	16
	HTB3-3014	HTBL3-3014	310	430	32
	HTB3-4514	HTBL3-4514	470	590	48
	HTB3-6014	HTBL3-6014	630	750	64
	HTB3-7514	HTBL3-7514	790	910	80
	HTB3-9014	HTBL3-9014	950	1070	96
	HTB3-10514	HTBL3-10514	1110	1230	112
	HTB3-12014	HTBL3-12014	1270	1390	128
	HTB3-13514	HTBL3-13514	1430	1550	144
	HTB3-15014	HTBL3-15014	1590	1710	160
	HTB3-16514	HTBL3-16514	1750	1870	176
	HTB3-18014	HTBL3-18014	1910	2030	192
	HTB3-19514	HTBL3-19514	2070	2190	208
20 mm	HTB3-1520	HTBL3-1520	150	270	16
	HTB3-3020	HTBL3-3020	310	430	32
	HTB3-4520	HTBL3-4520	470	590	48
	HTB3-6020	HTBL3-6020	630	750	64
	HTB3-7520	HTBL3-7520	790	910	80
	HTB3-9020	HTBL3-9020	950	1070	96
	HTB3-10520	HTBL3-10520	1110	1230	112
	HTB3-10520	HTBL3-10520	1270	1390	128
	HTB3-10520	HTBL3-10520	1430	1550	144
	HTB3-10520	HTBL3-10520	1590	1710	160
	HTB3-10520	HTBL3-10520	1750	1870	176
	HTB3-10520	HTBL3-10520	1910	2030	192
	HTB3-10520	HTBL3-10520	2070	2190	208
30 mm	HTB3-1530	HTBL3-1530	140	270	8
	HTB3-3030	HTBL3-3030	300	430	16
	HTB3-4530	HTBL3-4530	460	590	24
	HTB3-6030	HTBL3-6030	620	750	32
	HTB3-7530	HTBL3-7530	780	910	40
	HTB3-9030	HTBL3-9030	940	1070	48
	HTB3-10530	HTBL3-10530	1100	1230	56
	HTB3-12030	HTBL3-12030	1260	1390	64
	HTB3-13530	HTBL3-13530	1420	1550	72
	HTB3-15030	HTBL3-15030	1580	1710	80
	HTB3-16530	HTBL3-16530	1740	1870	96
	HTB3-18030	HTBL3-18030	1900	2030	104
	HTB3-19530	HTBL3-19530	2060	2190	112
35 mm	HTB3-1535	HTBL3-1535	140	270	8
	HTB3-3035	HTBL3-3035	300	430	16
	HTB3-4535	HTBL3-4535	460	590	24
	HTB3-6035	HTBL3-6035	620	750	32
	HTB3-7535	HTBL3-7535	780	910	40
	HTB3-9035	HTBL3-9035	940	1070	48
	HTB3-10535	HTBL3-10535	1100	1230	56
	HTB3-12035	HTBL3-12035	1260	1390	64
	HTB3-13535	HTBL3-13535	1420	1550	72
	HTB3-15035	HTBL3-15035	1580	1710	80
	HTB3-16535	HTBL3-16535	1740	1870	96
	HTB3-18035	HTBL3-18035	1900	2030	104
	HTB3-19535	HTBL3-19535	2060	2190	112
40 mm	HTB3-1540	HTBL3-1540	150	270	6
	HTB3-3040	HTBL3-3040	300	430	11
	HTB3-4540	HTBL3-4540	450	590	16
	HTB3-6040	HTBL3-6040	630	750	22
	HTB3-7540	HTBL3-7540	750	910	27
	HTB3-9040	HTBL3-9040	930	1070	32
	HTB3-10540	HTBL3-10540	1110	1230	38
	HTB3-12040	HTBL3-12040	1260	1390	43
	HTB3-13540	HTBL3-13540	1410	1550	48
	HTB3-15040	HTBL3-15040	1590	1710	54
	HTB3-16540	HTBL3-16540	1770	1870	59
	HTB3-18040	HTBL3-18040	1950	2030	64
	HTB3-19540	HTBL3-19540	2130	2190	69
50 mm	HTB3-1550	HTBL3-1550	120	270	4
	HTB3-3050	HTBL3-3050	280	430	8
	HTB3-4550	HTBL3-4550	440	590	12
	HTB3-6050	HTBL3-6050	600	750	16
	HTB3-7550	HTBL3-7550	760	910	20
	HTB3-9050	HTBL3-9050	920	1070	24
	HTB3-10550	HTBL3-10550	1080	1230	28
	HTB3-12050	HTBL3-12050	1240	1390	32
	HTB3-13550	HTBL3-13550	1400	1550	36
	HTB3-15050	HTBL3-15050	1560	1710	40
	HTB3-16550	HTBL3-16550	1770	1870	59
	HTB3-18050	HTBL3-18050	1950	2030	64
	HTB3-19550	HTBL3-19550	2130	2190	69

Safety Category 4

Working range: HTB5 : 0,1 - 5 mt HTBL5: 5 - 17 mt
Response time: < 30ms
Output: 2 relay output not in voltage NO - IC max 1A dc/30V protected in current - FEEDBACK (EDM)
Input: RESTART - MUTING - TEST
Poer source: + 24 Vdc ± 20%
Power consumption: 0,4 A max
Working temperature: - 10° + 60° C
Enclosure rating: IP 65
Connection: Circular connector M23 16 with pins and M12 with 5 pins
Reset: automatic, manual, semi automatic
Alignment led
Buttons to program the safety light curtain
Alphanumeric display showing safety light curtain status

RESOLUTION	RANGE		HEIGHT		NR.
	0,1 - 5 mt	5 - 17 mt	USEFUL	TOTAL	BEAMS
14 mm	HTB5-1514	HTBL5-1514	150	270	16
	HTB5-3014	HTBL5-3014	310	430	32
	HTB5-4514	HTBL5-4514	470	590	48
	HTB5-6014	HTBL5-6014	630	750	64
	HTB5-7514	HTBL5-7514	790	910	80
	HTB5-9014	HTBL5-9014	950	1070	96
	HTB510514	HTBL5-10514	1110	1230	112
	HTB5-12014	HTBL5-12014	1270	1390	128
	HTB5-13514	HTBL5-13514	1430	1550	144
	HTB5-15014	HTBL5-15014	1590	1710	160
	HTB5-16514	HTBL5-16514	1750	1870	176
	HTB5-18014	HTBL5-18014	1910	2030	192
	HTB5-19514	HTBL5-19514	2070	2190	208
20 mm	HTB5-1520	HTBL5-1520	150	270	16
	HTB5-3020	HTBL5-3020	310	430	32
	HTB5-4520	HTBL5-4520	470	590	48
	HTB5-6020	HTBL5-6020	630	750	64
	HTB5-7520	HTBL5-7520	790	910	80
	HTB5-9020	HTBL5-9020	950	1070	96
	HTB5-10520	HTBL5-10520	1110	1230	112
	HTB5-10520	HTBL5-10520	1270	1390	128
	HTB5-10520	HTBL5-10520	1430	1550	144
	HTB5-10520	HTBL5-10520	1590	1710	160
	HTB5-10520	HTBL5-10520	1750	1870	176
	HTB5-10520	HTBL5-10520	1910	2030	192
	HTB5-10520	HTBL5-10520	2070	2190	208
30 mm	HTB5-1530	HTBL5-1530	140	270	8
	HTB5-3030	HTBL5-3030	300	430	16
	HTB5-4530	HTBL5-4530	460	590	24
	HTB5-6030	HTBL5-6030	620	750	32
	HTB5-7530	HTBL5-7530	780	910	40
	HTB5-9030	HTBL5-9030	940	1070	48
	HTB5-10530	HTBL5-10530	1100	1230	56
	HTB5-12030	HTBL5-12030	1260	1390	64
	HTB5-13530	HTBL5-13530	1420	1550	72
	HTB5-15030	HTBL5-15030	1580	1710	80
	HTB5-16530	HTBL5- 16530	1740	1870	96
	HTB5-18030	HTBL5 -18030	1900	2030	104
	HTB5-19530	HTBL5 -19530	2060	2190	112
35 mm	HTB5-1535	HTBL5-1535	140	270	8
	HTB5-3035	HTBL5-3035	300	430	16
	HTB5-4535	HTBL5-4535	460	590	24
	HTB5-6035	HTBL5-6035	620	750	32
	HTB5-7535	HTBL5-7535	780	910	40
	HTB5-9035	HTBL5-9035	940	1070	48
	HTB5-10535	HTBL5-10535	1100	1230	56
	HTB5-12035	HTBL5-12035	1260	1390	64
	HTB5-13535	HTBL5-13535	1420	1550	72
	HTB5-15035	HTBL5-15035	1580	1710	80
	HTB5-16535	HTBL5 -16535	1740	1870	96
	HTB5-18035	HTBL5 -18035	1900	2030	104
	HTB5-19535	HTBL5 -19535	2060	2190	112
40 mm	HTB5-1540	HTBL5-1540	150	270	6
	HTB5-3040	HTBL5-3040	300	430	11
	HTB5-4540	HTBL5-4540	450	590	16
	HTB5-6040	HTBL5-6040	630	750	22
	HTB5-7540	HTBL5-7540	750	910	27
	HTB5-9040	HTBL5-9040	930	1070	32
	HTB5-10540	HTBL5-10540	1110	1230	38
	HTB5-12040	HTBL5-12040	1260	1390	43
	HTB5-13540	HTBL5-13540	1410	1550	48
	HTB5-15040	HTBL5-15040	1590	1710	54
	HTB5-16540	HTBL5-16540	1770	1870	59
	HTB5-18040	HTBL5-18040	1950	2030	64
	HTB5-19540	HTBL5-19540	2130	2190	69
50 mm	HTB5-1550	HTBL5-1550	120	270	4
	HTB5-3050	HTBL5-3050	280	430	8
	HTB5-4550	HTBL5-4550	440	590	12
	HTB5-6050	HTBL5-6050	600	750	16
	HTB5-7550	HTBL5-7550	760	910	20
	HTB5-9050	HTBL5-9050	920	1070	24
	HTB5-10550	HTBL5-10550	1080	1230	28
	HTB5-12050	HTBL5-12050	1240	1390	32
	HTB5-13550	HTBL5-13550	1400	1550	36
	HTB5-15050	HTBL5-15050	1560	1710	40
	HTB5-16550	HTBL5-16550	1720	1870	44
	HTB5-18050	HTBL5-18050	1880	2030	48
	HTB5-19550	HTBL5-19550	2040	2190	52