Contrinex Safety Light Curtains – Hand-safe



Safety light curtain with 30 mm resolution

- Available as a set, or order sender and receiver to make a complete sensor
- Protective height from 279mm to 1827mm
- Operating distance up to 12m
- M12 quick-disconnect (order cable separately)
- Dual PNP outputs
- Mounting brackets included with all units
- Instruction manual and testing rod included with sender unit
- IP65, IP67 rated
- Type 4 and Category 4 PLe

YBB-30 Series Safety Light Curtain Selection Table

Part Number		Price	Protective Height Hs mm [in]	Housing Height Hb mm [in]	Total Height Ht mm [in]	Number of Beams	Current Consumption [mA]	Response Time [ms]	$MTTF_d$ (years)	DC_{avg}	Product Weight per Unit
YBB-30S4-0250-G012	Sender	$277.00	279 [10.98]	350 [13.78]	380 [23.94]	17	45	5.2	142	96%	750g 1.65 lbs
YBB-30R4-0250-G012	Receiver	$305.00					85				
YBB-30K4-0250-G012	Set	$485.00					See above				1500g 3.3 lbs
YBB-30S4-0400-G012	Sender	$331.00	408 [16.06]	479 [18.86]	509 [20.04]	25	45	6.8	126	96%	1020g 2.25 lbs
YBB-30R4-0400-G012	Receiver	$372.00					85				
YBB-30K4-0400-G012	Set	$600.00					See above				2040g 4.50 lbs
YBB-30S4-0500-G012	Sender	$383.00	537 [21.14]	608 [23.94]	638 [25.12]	33	45	8.4	114	96%	1300g 2.87 lbs
YBB-30R4-0500-G012	Receiver	$426.00					90				
YBB-30K4-0500-G012	Set	$695.00					See above				2600g 5.74 lbs
YBB-30S4-0700-G012	Sender	$428.00	666 [26.22]	737 [29.02]	767 [30.20]	41	45	10	104	95%	1580g 3.48 lbs
YBB-30R4-0700-G012	Receiver	$487.00					95				
YBB-30K4-0700-G012	Set	$790.00					See above				3160g 6.96 lbs
YBB-30S4-0800-G012	Sender	$476.00	795 [31.30]	866 [34.09]	896 [35.28]	49	45	11.6	96	95%	1850g 4.08 lbs
YBB-30R4-0800-G012	Receiver	$542.00					100				
YBB-30K4-0800-G012	Set	$880.00					See above				3700g 8.16 lbs
YBB-30S4-0900-G012	Sender	$526.00	924 [36.38]	995 [39.17]	1025 [40.35]	57	45	13.2	89	95%	2130g 4.70 lbs
YBB-30R4-0900-G012	Receiver	$605.00					100				
YBB-30K4-0900-G012	Set	$975.00					See above				4260g 9.4 lbs
YBB-30S4-1000-G012	Sender	$582.00	1053 [41.46]	1124 [44.25]	1154 [45.43]	65	45	14.8	83	95%	2400g 5.29 lbs
YBB-30R4-1000-G012	Receiver	$664.00					105				
YBB-30K4-1000-G012	Set	$1,075.00					See above				4800g 10.58 lbs

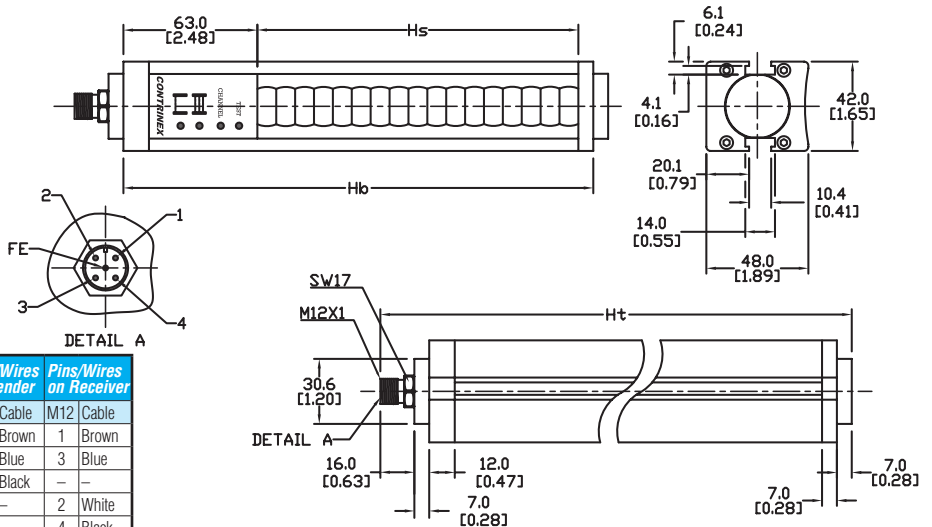
Note: AutomationDirect does not recommend using these light curtains with any device other than our Safety Relay Light Curtain Controllers.

Contrinex Safety Light Curtains – Hand-safe

YBB-30 Series Safety Light Curtain Selection Table											
Part Number		Price	Protective Height Hs mm [in]	Housing Height Hb mm [in]	Total Height Ht mm [in]	Number of Beams	Current Consumption [mA]	Response Time [ms]	$MTTF_d$ (years)	DC_{avg}	Product Weight per Unit
YBB-30S4-1200-G012	Sender	$627.00	1182 [46.54]	1253 [49.33]	1283 [50.51]	73	45	16.4	77	95%	2680g 5.91 lbs
YBB-30R4-1200-G012	Receiver	$727.00					110				
YBB-30S4-1300-G012	Sender	$615.00	1311 [51.61]	1382 [54.41]	1412 [55.59]	81	45	18	73	95%	2960g 6.53 lbs
YBB-30R4-1300-G012	Receiver	$715.00					110				
YBB-30S4-1400-G012	Sender	$660.00	1440 [56.69]	1511 [59.49]	1541 [60.67]	89	45	19.6	69	95%	3230g 7.12 lbs
YBB-30R4-1400-G012	Receiver	$771.00					115				
YBB-30S4-1600-G012	Sender	$773.00	1569 [61.77]	1640 [64.57]	1670 [65.75]	97	45	21.2	65	94%	3510g 7.74 lbs
YBB-30R4-1600-G012	Receiver	$908.00					120				
YBB-30S4-1700-G012	Sender	$765.00	1698 [66.85]	1769 [69.65]	1799 [70.83]	105	45	22.8	62	94%	3780g 8.33 lbs
YBB-30R4-1700-G012	Receiver	$886.00					125				
YBB-30S4-1800-G012	Sender	$795.00	1827 [71.93]	1898 [74.72]	1928 [75.91]	113	45	24.4	59	94%	4060g 8.95 lbs
YBB-30R4-1800-G012	Receiver	$942.00					130				

Note: AutomationDirect does not recommend using these light curtains with any device other than our Safety Relay Light Curtain Controllers.

Dimensions
mm [in]



Pin outs

Assignment	Function	Pins/Wires on Sender		Pins/Wires on Receiver	
		M12	Cable	M12	Cable
Supply Voltage	24VDC for channel 1; 0V for channel 2	1	Brown	1	Brown
Supply Voltage	0V for channel 1; 24VDC for channel 2	3	Blue	3	Blue
Test Mode	0V test active; 24 V test inactive	4	Black	–	–
Output	OSSD1 (Output Single Switching Device)	–	–	2	White
Output	OSSD2 (Output Single Switching Device)	–	–	4	Black
Functional Earth	Shield (Ground)	FE	Gray	FE	Gray

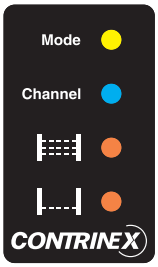
Note: Cable color represents standard industrial pinout. Confirm the specific color and pinout during installation.

Contrinex Safety Light Curtains – Hand-safe

YBB-30 Series Safety Light Curtain Specifications	
Resolution	30mm
Safety Level	Category 4, PLe (EN/ISO 13849-1). Type 4 (IEC 61496-1/2)
Beam Axis Interval	16mm
Supply Voltage	24VDC ± 20%
Current Consumption	See Selection Table
Outputs	2 PNP outputs, short-circuit protected
Output Current	Maximum 0.2 amps per output (@ 50°C/122°F)
Output Voltage ON minimum	1.0 V less than the supplied operating voltage at 25°C (77°F)
Output Voltage OFF	<1.0 V
Leakage Current	< 1mA
Maximum Load Inductance	100mH
Response Time	See Selection Table
Sender Wavelength	IR 880nm
Operating Range	0.25 to 12m
Protection Class	Class III (IEC 61140)
Startup Delay	< 0.5 seconds
Vibration Resistance	10 to 55Hz, 0.35 mm amplitude, 1 octave/min., 20 sweeps for each axis
Shock Resistance	10g during 16ms, 1000 times for each axis
Light Immunity	Incandescent lamp: 3000lx max. (light intensity on receiver surface) Xenon flash tube: flash duration 1.2 ms max. with a frequency of 2Hz max. (TS 61496-2)
Operating Temperature	0 to 50°C (32 to 122°F)
Storage Temperature	-25 to 70°C (-13 to 158°F)
Humidity	15 to 95% (non-condensing)
Degree of Protection (EN 60529)	IP65
Ambient Brightness	TS 61496-2: 2006
Reference Standards	IEC 61496-1, IEC 61496-2
Housing Material	Aluminum, PMMA (Polymethylmethacrylate [acrylic]) front screen
Material of Upper and Lower Cover	PA (Polyamide [nylon])+ 30% fiberglass
Material of Optics	PMMA (Polymethylmethacrylate [acrylic])
Cable Runs	10m maximum (at 10nF capacitive load)
Approvals	CE, UL file #E321951, RoHS, TUV

To obtain the most current agency approval information, see the Agency Approval Checklist section on the specific part number's web page at www.AutomationDirect.com

LED Status Indicators



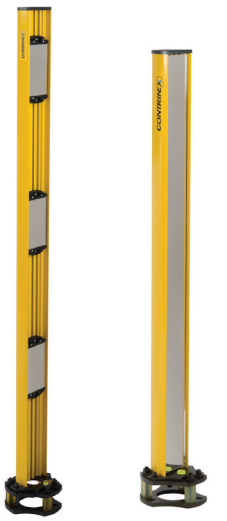
Sender	
LED	***Finger & hand protection (YBB)***
Mode	Yellow when test mode is active
Channel	Blue when channel 1 is selected
	Purple when channel 2 is selected
Alignment	Steady orange when the screen is not fully aligned
	Flashing orange when the first third of the screen is aligned
	Off when screen is fully aligned
Alignment	Steady orange when the lowest beam is not aligned
	Flashing orange when the lowest beam is aligned
	Off when screen is fully aligned



Receiver	
LED	***Finger & hand protection (YBB)***
Power	Green when power is ON
Channel	Blue when channel 1 is selected
	Purple when channel 2 is selected
Status	Green when OSSD outputs are ON
Status	Red when OSSD outputs are OFF

Contrinex Safety Light Curtains Accessories

Safety Light Curtains Accessories Overview			
Part Number	**Price**	**Description**	**Use With**
Mirror Columns			
YXC-1060-M11	$640.00	Safety light curtain mirror column. 1060mm housing height, 974mm mirror length aluminum profile with steel floor plates. Powder-varnished yellow (RAL1021) finish. Mounting hardware included.	YBB-xxxx-0150-xxx to YBB-xxxx-0800-xxx units
YXC-1360-M11	$755.00	Safety light curtain mirror column. 1360mm housing height, 1274mm mirror length aluminum profile with steel floor plates. Powder-varnished yellow (RAL1021) finish. Mounting hardware included.	YBB-xxxx-0900-xxx to YBB-xxxx-1000-xxxx units YCA-xxxx-3400-xxx and YCA-xxxx-4300-xxx units
YXC-1660-M11	$875.00	Safety light curtain mirror column. 1660mm housing height, 1574mm mirror length aluminum profile with steel floor plates. Powder-varnished yellow (RAL1021) finish. Mounting hardware included.	YBB-xxxx-1200-xxx to YBB-xxxx-1400-xxxx units YCA-xxxx-4400-xxx units
YXC-1960-M11	$995.00	Safety light curtain mirror column. 1960mm housing height, 1874mm mirror length aluminum profile with steel floor plates. Powder-varnished yellow (RAL1021) finish. Mounting hardware included.	YBB-xxxx-1600-xxx to YBB-xxxx-1700-xxxx units
YXC-1360-M23	$390.00	Safety light curtain mirror column. 1360mm housing height, 2 x 400 beam gap aluminum profile with steel floor plates. Powder-varnished yellow (RAL1021) finish. Mounting hardware included.	YCA-xxxx-3400-xxx units
YXC-1360-M24	$465.00	Safety light curtain mirror column. 1360mm housing height, 3 x 300 beam gap aluminum profile with steel floor plates. Powder-varnished yellow (RAL1021) finish. Mounting hardware included.	YCA-xxxx-4300-xxx units
Protective Columns			
YXC-1060-F00	$362.00	Safety light curtain protective column. 997mm housing height, aluminum profile with steel floor plates. Powder-varnished yellow (RAL1021) finish. Mounting hardware included. Two required to protect sender and receiver. 1/pk.	YBB-xxxx-0150-xxx to YBB-xxxx-0800-xxx units
YXC-1360-F00	$400.00	Safety light curtain protective column. 1297mm housing height, aluminum profile with steel floor plates Powder-varnished yellow (RAL1021) finish. Mounting hardware included. Two required to protect sender and receiver. 1/pk.	YBB-xxxx-0900-xxx to YBB-xxxx-1000-xxxx units YCA-xxxx-3400-xxxx to YCA-xxxx-4300-xxxx units
YXC-1660-F00	$432.00	Safety light curtain protective column. 1597mm housing height, aluminum profile with steel floor plates. Powder-varnished yellow (RAL1021) finish. Mounting hardware included. Two required to protect sender and receiver. 1/pk.	YBB-xxxx-1200-xxx to YBB-xxxx-1400-xxxx units YCA-xxxx-4400-xxxx units
YXC-1960-F00	$451.00	Safety light curtain protective column. 1897mm housing height, aluminum profile with steel floor plates. Powder-varnished yellow (RAL1021) finish. Mounting hardware included. Two required to protect sender and receiver. 1/pk.	YBB-xxxx-1600-xxx to YBB-xxxx-1800-xxxx units
Other			
YXL-0001-000	$240.00	Laser alignment tool for safety light curtains, class 2 laser, range up to 50 meters, useable and clippable to YBB and YCA light curtains models, 2 AAA batteries included.	All
YXW-0001-000	$6.00	Safety light curtain mounting brackets for top and bottom mounting. Plastic. 2/pk.	
YXW-0003-000	$6.00	Safety light curtain sliding T-nuts for side mounting. Metal. 2/pk. Ideal torque from M5x0.8 thread is 6 Nm (4.42 lb-ft, 53.1 lb-in.).	



Light Curtain Mirror Columns

- Multi-sided safe guarding of danger zones
- Robust protective profile
- 10% reduction of operating distance for mirror



Light Curtain Protective Column

- Automatically bounces back after physical shock or vibration.
- Robust baseplate allows radial and vertical alignment.
- Solid aluminum profile



YXW-0001-000



YXW-0003-000

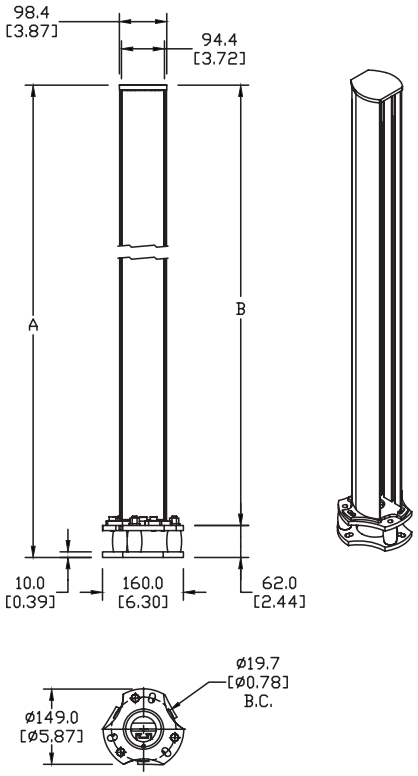


YXL-0001-000

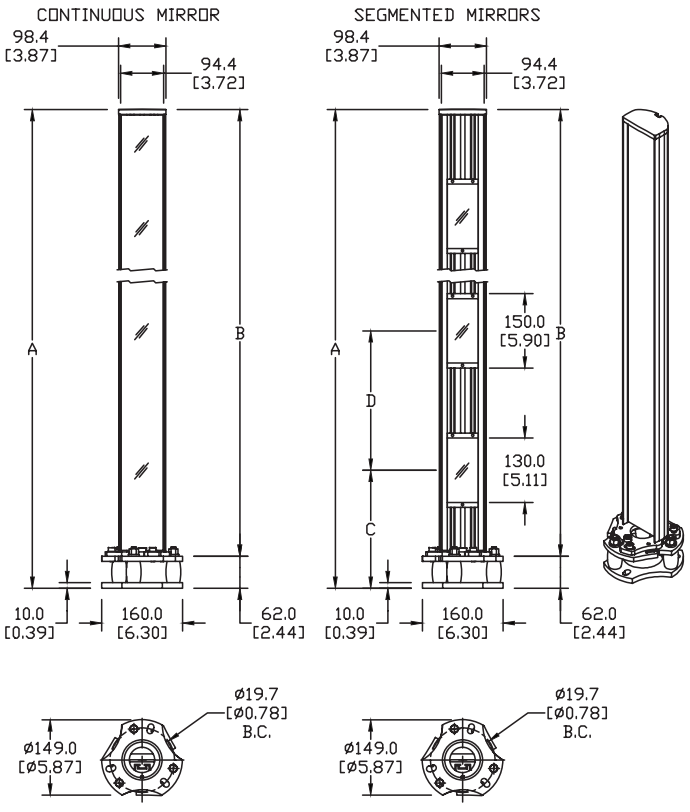
Contrinex Safety Light Curtains Accessories

Dimensions mm [in]

Protective column



Mirror column



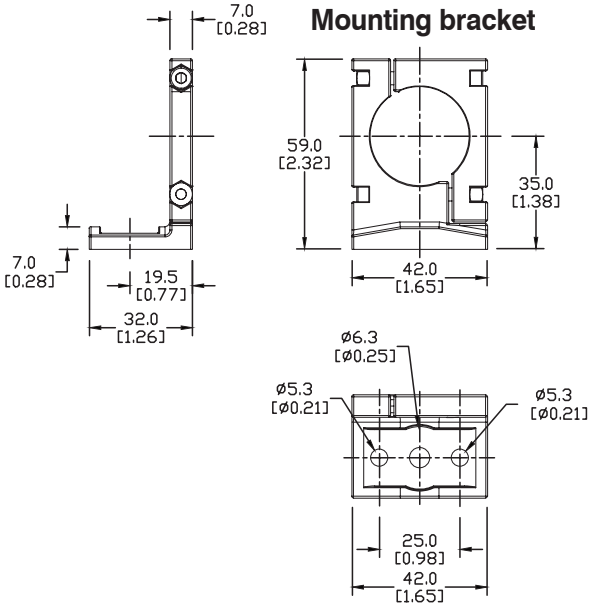
YXC-xxxx-M11 YXC-1360-Mxx

Safety Light Curtains Protective Columns Dimensions		
Part Number	Total Height A mm [in]	Housing Height B mm [in]
YXC-1060-F00	1060 [41.73]	997 [39.25]
YXC-1360-F00	1360 [53.54]	1297 [51.06]
YXC-1660-F00	1660 [65.35]	1597 [62.87]
YXC-1960-F00	1960 [77.17]	1897 [74.69]

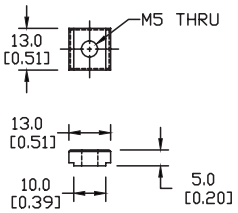
Note: Full and open top caps are provided to accommodate taller units.

Safety Light Curtains Mirror Columns Dimensions				
Part Number	Total Height A mm [in]	Mirror Height B mm [in]	Height to Lowest Beam C mm [in]	Beam Gap D mm [in]
YXC-1060-M11	1060 [41.73]	974 [38.35]	n/a	n/a
YXC-1360-M11	1360 [53.54]	1274 [50.16]	n/a	n/a
YXC-1660-M11	1660 [65.35]	1574 [61.97]	n/a	n/a
YXC-1960-M11	1960 [77.17]	1874 [73.78]	n/a	n/a
YXC-1360-M23	1360 [53.54]	n/a	2 x 400 [2 x 15.75]	300 [11.81]
YXC-1360-M24	1360 [53.54]	n/a	3 x 300 [2 x 11.81]	300 [11.81]

Mounting bracket



T-Nuts for side mounting



Contrinex Safety Light Curtains Accessories

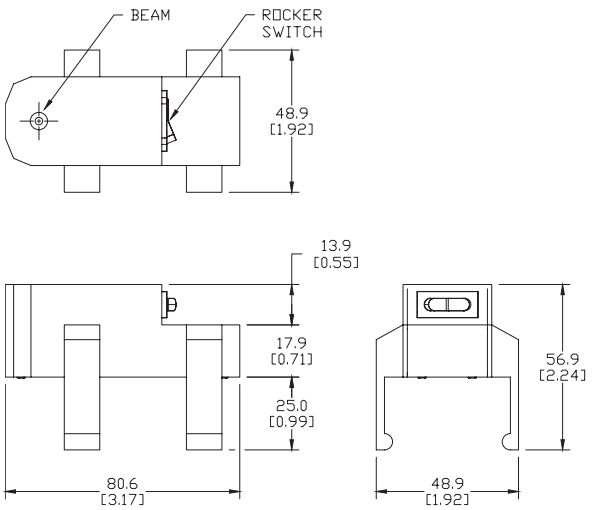


Laser Alignment Tool

- Clips on YBB and YCA Curtains / Barriers
- High quality lens for narrow output beam
- Up to 50m [164ft] range
- <1mW output power
- Standard AA batteries included

Laser Alignment Tool YXL-0001-000 Specifications	
Supply Voltage Range	2.5 – 3.3 VDC
Laser Module Optical Output Power	<1mW (Class 2)
Range	50m (164ft)
Ambient Temperature Range	0 – 40°C (32 – 104°F)
Storage Temperature Range	0 – 60°C (32 – 140°F)
Wavelength	655nm ± 1%
Laser Beam Spot Size at 10m	< 10mm
Divergence Angle	1.1 mrad
Housing Material	PA with 30% fiberglass
Mounting	clippable onto YBB / YCA devices
Weight	95g (.21 lbs)

Dimensions mm [in]



Warning: Safety products sold by AutomationDirect are Safety components only.

The purchaser/installer is solely responsible for the application of these components and ensuring all necessary steps have been taken to assure each application and use meets all performance and applicable safety requirements and/or local, national and/or international safety codes as required by the application. AutomationDirect cannot certify that our products used solely or in conjunction with other AutomationDirect or other vendors' products will assure safety for any application.

Any person using or applying any products sold by AutomationDirect is responsible for learning the safety requirements for their individual application and applying them, and therefore assumes all risks, and accepts full and complete responsibility for the selection and suitability of the product for their respective application. AutomationDirect does not provide design or consulting services, and cannot advise whether any specific application or use of our products would ensure compliance with the safety requirements for any application.