

# 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]	MTTFd (years)	DCavg	Product Weight per Unit
<a href="#">YBB-30S4-0250-G012</a>	Sender	\$318.00	274 [10.79]	350 [13.78]	380 [14.96]	17	45	5.2	142	96%	750g
<a href="#">YBB-30R4-0250-G012</a>	Receiver	\$349.00					85				1.65 lb
<a href="#">YBB-30K4-0250-G012</a>	Set	\$555.00					See above				1500g
<a href="#">YBB-30S4-0400-G012</a>	Sender	\$379.00	403 [15.87]	479 [18.86]	509 [20.04]	25	45	6.8	126	96%	1020g
<a href="#">YBB-30R4-0400-G012</a>	Receiver	\$426.00					85				2.25 lb
<a href="#">YBB-30K4-0400-G012</a>	Set	\$686.00					See above				2040g
<a href="#">YBB-30S4-0500-G012</a>	Sender	\$440.00	532 [20.94]	608 [23.94]	638 [25.12]	33	45	8.4	114	96%	1300g
<a href="#">YBB-30R4-0500-G012</a>	Receiver	\$489.00					90				2.87 lb
<a href="#">YBB-30K4-0500-G012</a>	Set	\$796.00					See above				2600g
<a href="#">YBB-30S4-0700-G012</a>	Sender	\$491.00	661 [26.02]	737 [29.02]	767 [30.20]	41	45	10	104	95%	1580g
<a href="#">YBB-30R4-0700-G012</a>	Receiver	\$557.00					95				3.48 lb
<a href="#">YBB-30K4-0700-G012</a>	Set	\$905.00					See above				3160g
<a href="#">YBB-30S4-0800-G012</a>	Sender	\$546.00	790 [31.10]	866 [34.09]	896 [35.28]	49	45	11.6	96	95%	1850g
<a href="#">YBB-30R4-0800-G012</a>	Receiver	\$622.00					100				4.08 lb
<a href="#">YBB-30K4-0800-G012</a>	Set	\$1,008.00					See above				3700g
<a href="#">YBB-30S4-0900-G012</a>	Sender	\$602.00	919 [36.18]	995 [39.17]	1025 [40.35]	57	45	13.2	89	95%	2130g
<a href="#">YBB-30R4-0900-G012</a>	Receiver	\$693.00					100				4.70 lb
<a href="#">YBB-30K4-0900-G012</a>	Set	\$1,117.00					See above				4260g
<a href="#">YBB-30S4-1000-G012</a>	Sender	\$668.00	1048 [41.26]	1124 [44.25]	1154 [45.43]	65	45	14.8	83	95%	2400g
<a href="#">YBB-30R4-1000-G012</a>	Receiver	\$761.00					105				5.29 lb
<a href="#">YBB-30K4-1000-G012</a>	Set	\$1,231.00					See above				4800g

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

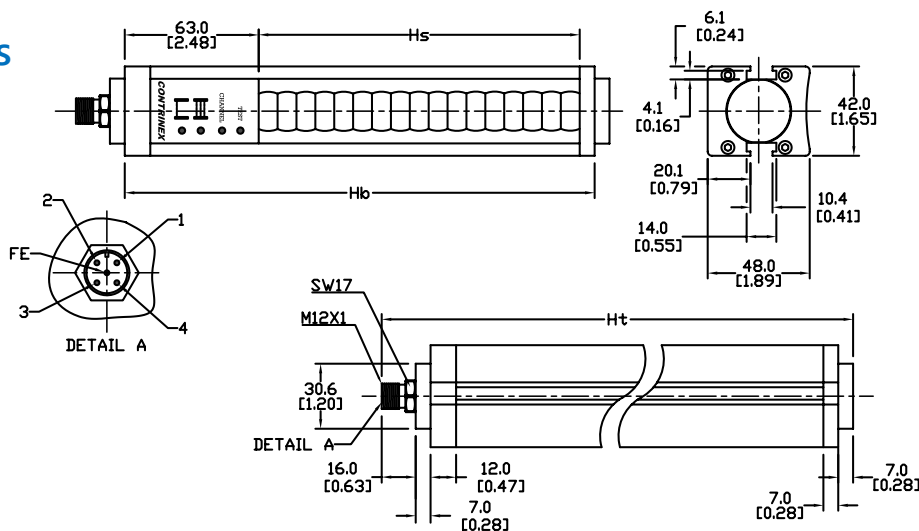
## YBB-30 Series Safety Light Curtain Selection Table

Part Number	Price	Description	Protective Height (Hs) mm [in]	Housing Height (Hb) mm [in]	Total Height (Ht) mm [in]	Number of Beams	Current Consumption [mA]	Response Time [ms]	MTTFd (years)	DCavg	Weight g [lb]
<a href="#">YBB-30S4-1200-G012</a>	\$719.00	Sender	1177 [46.34]	1253 [49.33]	1283 [50.51]	73	45	16.4	77	95%	2680 [5.91]
<a href="#">YBB-30R4-1200-G012</a>	\$832.00	Receiver					110				
<a href="#">YBB-30K4-1200-G012</a>	\$1,203.00	Sender/Receiver Pair					155				
<a href="#">YBB-30S4-1300-G012</a>	\$704.00	Sender	1306 [51.42]	1382 [54.41]	1412 [55.59]	81	45	18	73	95%	2960 [6.53]
<a href="#">YBB-30R4-1300-G012</a>	\$818.00	Receiver					110				
<a href="#">YBB-30K4-1300-G012</a>	\$1,229.00	Sender/Receiver Pair					155				
<a href="#">YBB-30S4-1400-G012</a>	\$756.00	Sender	1435 [56.49]	1511 [59.49]	1541 [60.67]	89	45	19.6	69	95%	3230 [7.12]
<a href="#">YBB-30R4-1400-G012</a>	\$884.00	Receiver					115				
<a href="#">YBB-30K4-1400-G012</a>	\$1,349.00	Sender/Receiver Pair					160				
<a href="#">YBB-30S4-1600-G012</a>	\$886.00	Sender	1564 [61.58]	1640 [64.57]	1670 [65.75]	97	45	21.2	65	94%	3510 [7.74]
<a href="#">YBB-30R4-1600-G012</a>	\$1,040.00	Receiver					120				
<a href="#">YBB-30K4-1600-G012</a>	\$1,479.00	Sender/Receiver Pair					165				
<a href="#">YBB-30S4-1700-G012</a>	\$876.00	Sender	1693 [66.65]	1769 [69.65]	1799 [70.83]	105	45	22.8	62	94%	3780 [8.33]
<a href="#">YBB-30R4-1700-G012</a>	\$1,014.00	Receiver					125				
<a href="#">YBB-30K4-1700-G012</a>	\$1,531.00	Sender/Receiver Pair					170				
<a href="#">YBB-30S4-1800-G012</a>	\$910.00	Sender	1822 [71.73]	1898 [74.72]	1928 [75.91]	113	45	24.4	59	94%	4060 [8.95]
<a href="#">YBB-30R4-1800-G012</a>	\$1,081.00	Receiver					130				
<a href="#">YBB-30K4-1800-G012</a>	\$1,618.00	Sender/Receiver Pair					175				

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

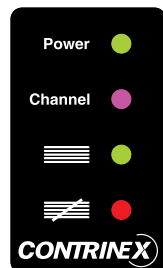
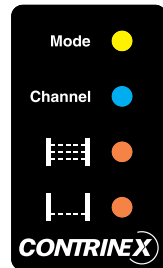
Note: Cable color represents standard industrial pinout. Confirm the specific color and pinout during installation.

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YBB-30 Series Safety Light Curtain Specifications	
<b>Resolution</b>	<b>30mm</b>
<b>Safety Level</b>	Category 4, PLe (EN/ISO 13849-1). Type 4 (IEC 61496-1/2)
<b>Beam Axis Interval</b>	16mm
<b>Supply Voltage</b>	24VDC ± 20%
<b>Current Consumption</b>	See Selection Table
<b>Outputs</b>	2 PNP outputs, short-circuit protected
<b>Output Current</b>	Maximum 0.2 amps per output (@ 50°C/122°F)
<b>Output Voltage ON minimum</b>	1.0 V less than the supplied operating voltage at 25°C (77°F)
<b>Output Voltage OFF</b>	<1.0 V
<b>Leakage Current</b>	< 1mA
<b>Maximum Load Inductance</b>	100mH
<b>Response Time</b>	See Selection Table
<b>Sender Wavelength</b>	IR 880nm
<b>Operating Range</b>	0.25 to 12m
<b>Protection Class</b>	Class III (IEC 61140)
<b>Startup Delay</b>	< 0.5 seconds
<b>Vibration Resistance</b>	10 to 55Hz, 0.35 mm amplitude, 1 octave/min., 20 sweeps for each axis
<b>Shock Resistance</b>	10g during 16ms, 1000 times for each axis
<b>Light Immunity</b>	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)
<b>Operating Temperature</b>	0 to 50°C (32 to 122°F)
<b>Storage Temperature</b>	-25 to 70°C (-13 to 158°F)
<b>Humidity</b>	15 to 95% (non-condensing)
<b>Degree of Protection (EN 60529)</b>	IP65
<b>Ambient Brightness</b>	TS 61496-2: 2006
<b>Reference Standards</b>	IEC 61496-1, IEC 61496-2
<b>Housing Material</b>	Aluminum, PMMA (Polymethylmethacrylate [acrylic]) front screen
<b>Material of Upper and Lower Cover</b>	PA (Polyamide [nylon])+ 30% fiberglass
<b>Material of Optics</b>	PMMA (Polymethylmethacrylate [acrylic])
<b>Cable Runs</b>	100m [328.1 ft] maximum (at 10nF capacitive load)
<b>Approvals</b>	CE, UL file #E321951, RoHS, TÜV

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](http://www.AutomationDirect.com)

## LED Status Indicators



Sender	
<b>LED</b>	<b>Finger &amp; hand protection (YBB)</b>
<b>Mode</b>	Yellow when test mode is active
<b>Channel</b>	Blue when channel 1 is selected
	Purple when channel 2 is selected
<b>Alignment</b>	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
<b>Alignment</b>	Steady orange when the lowest beam is not aligned
	Flashing orange when the lowest beam is aligned
	Off when screen is fully aligned

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

# Contrinex Safety Light Curtains Accessories

Safety Light Curtains Accessories Overview			
Part Number	Price	Description	Use With
<a href="#">YXL-0001-000</a>	\$275.00	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.	YBB Series YCA Series
<a href="#">YXW-0001-000</a>	\$7.00	Safety light curtain mounting brackets for top and bottom mounting. Plastic. 2/pk.	
<a href="#">YXW-0003-000</a>	\$7.00	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.).	



[YXW-0001-000](#)



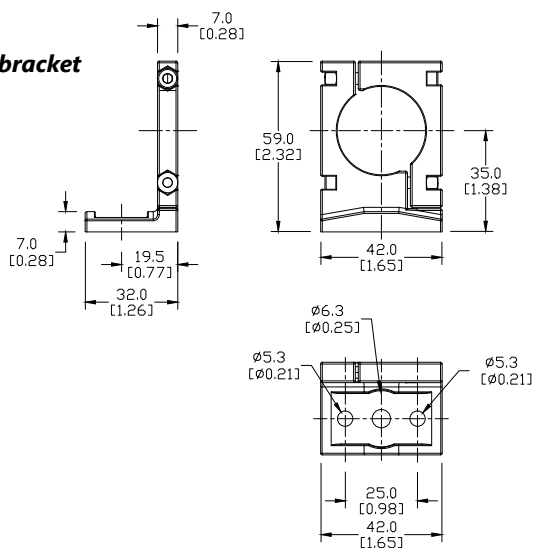
[YXW-0003-000](#)



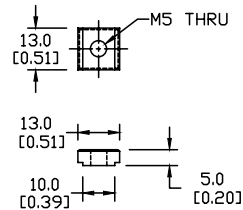
[YXL-0001-000](#)

## Dimensions mm [in]

### Mounting bracket



### T-Nuts for side mounting

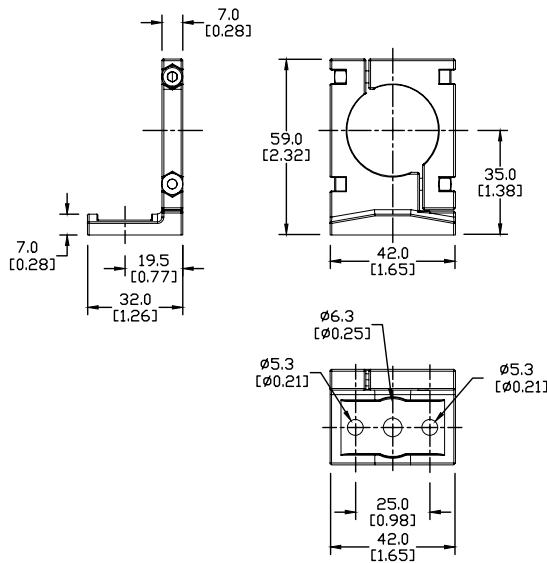


# Contrinex Safety Light Curtains Accessories

## Mounting bracket



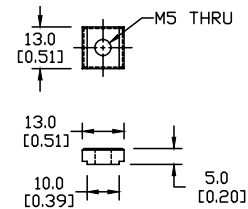
**YXW-0001-000**



## T-Nuts for side mounting



**YXW-0003-000**



## 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

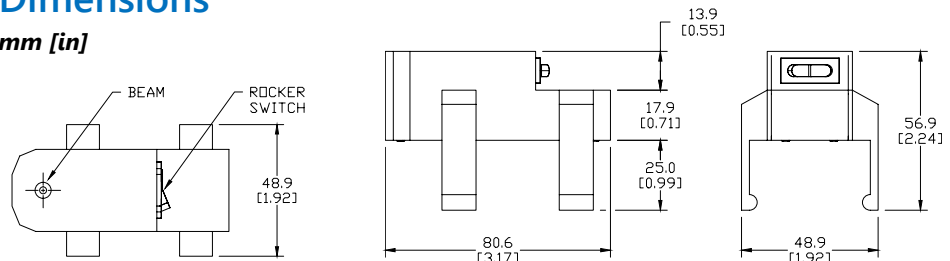


**YXL-0001-000**

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 (0.21 lb)

## Dimensions

mm [in]



See our website [www.AutomationDirect.com](http://www.AutomationDirect.com) for complete engineering drawings.



### 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.

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