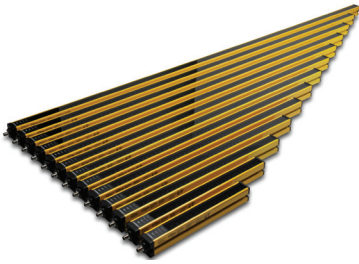


Contrinex Safety Light Curtains

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
YBB-30S4-0250-G012	Sender		274 [10.79]	350 [13.78]	380 [14.96]	17	45	5.2	142	96%	750g
YBB-30R4-0250-G012	Receiver	85					1.65 lb				
YBB-30K4-0250-G012	Set	See above					1500g				
YBB-30S4-0400-G012	Sender		403 [15.87]	479 [18.86]	509 [20.04]	25	45	6.8	126	96%	1020g
YBB-30R4-0400-G012	Receiver	85					2.25 lb				
YBB-30K4-0400-G012	Set	See above					2040g				
YBB-30S4-0500-G012	Sender		532 [20.94]	608 [23.94]	638 [25.12]	33	45	8.4	114	96%	1300g
YBB-30R4-0500-G012	Receiver	90					2.87 lb				
YBB-30K4-0500-G012	Set	See above					2600g				
YBB-30S4-0700-G012	Sender		661 [26.02]	737 [29.02]	767 [30.20]	41	45	10	104	95%	1580g
YBB-30R4-0700-G012	Receiver	95					3.48 lb				
YBB-30K4-0700-G012	Set	See above					3160g				
YBB-30S4-0800-G012	Sender		790 [31.10]	866 [34.09]	896 [35.28]	49	45	11.6	96	95%	1850g
YBB-30R4-0800-G012	Receiver	100					4.08 lb				
YBB-30K4-0800-G012	Set	See above					3700g				
YBB-30S4-0900-G012	Sender		919 [36.18]	995 [39.17]	1025 [40.35]	57	45	13.2	89	95%	2130g
YBB-30R4-0900-G012	Receiver	100					4.70 lb				
YBB-30K4-0900-G012	Set	See above					4260g				
YBB-30S4-1000-G012	Sender		1048 [41.26]	1124 [44.25]	1154 [45.43]	65	45	14.8	83	95%	2400g
YBB-30R4-1000-G012	Receiver	105					5.29 lb				
YBB-30K4-1000-G012	Set	See above					4800g				

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

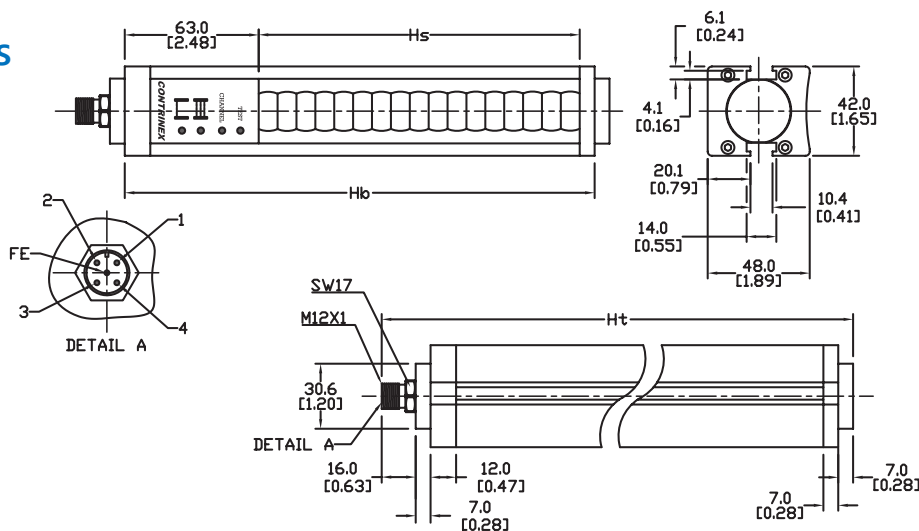
Contrinex Safety Light Curtains – Hand-safe

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)	DC _{avg}	Weight g [lb]
YBB-30S4-1200-G012		Sender	1177 [46.34]	1253 [49.33]	1283 [50.51]	73	45	16.4	77	95%	2680 [5.91]
YBB-30R4-1200-G012	Receiver	110									
YBB-30K4-1200-G012	Sender/Receiver Pair	155									
YBB-30S4-1300-G012		Sender	1306 [51.42]	1382 [54.41]	1412 [55.59]	81	45	18	73	95%	2960 [6.53]
YBB-30R4-1300-G012	Receiver	110									
YBB-30K4-1300-G012	Sender/Receiver Pair	155									
YBB-30S4-1400-G012		Sender	1435 [56.49]	1511 [59.49]	1541 [60.67]	89	45	19.6	69	95%	3230 [7.12]
YBB-30R4-1400-G012	Receiver	115									
YBB-30K4-1400-G012	Sender/Receiver Pair	160									
YBB-30S4-1600-G012		Sender	1564 [61.58]	1640 [64.57]	1670 [65.75]	97	45	21.2	65	94%	3510 [7.74]
YBB-30R4-1600-G012	Receiver	120									
YBB-30K4-1600-G012	Sender/Receiver Pair	165									
YBB-30S4-1700-G012		Sender	1693 [66.65]	1769 [69.65]	1799 [70.83]	105	45	22.8	62	94%	3780 [8.33]
YBB-30R4-1700-G012	Receiver	125									
YBB-30K4-1700-G012	Sender/Receiver Pair	170									
YBB-30S4-1800-G012		Sender	1822 [71.73]	1898 [74.72]	1928 [75.91]	113	45	24.4	59	94%	4060 [8.95]
YBB-30R4-1800-G012	Receiver	130									
YBB-30K4-1800-G012	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

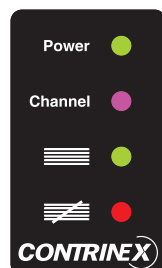
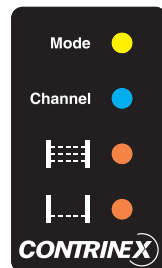
Note: Cable color represents standard industrial pinout. Confirm the specific color and pinout during installation.

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	100m [328.1 ft] maximum (at 10nF capacitive load)
Approvals	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

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
YXL-0001-000		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
YXW-0001-000		Safety light curtain mounting brackets for top and bottom mounting. Plastic. 2/pk.	
YXW-0003-000		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](#)



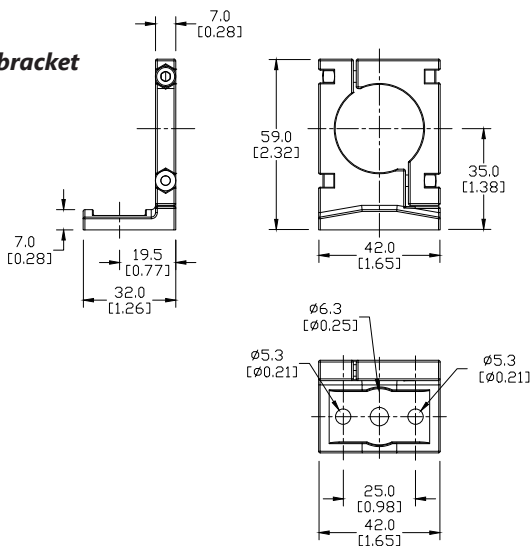
[YXW-0003-000](#)



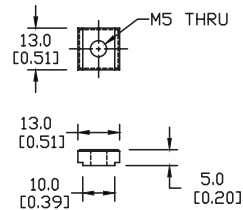
[YXL-0001-000](#)

Dimensions mm [in]

Mounting bracket



T-Nuts for side mounting

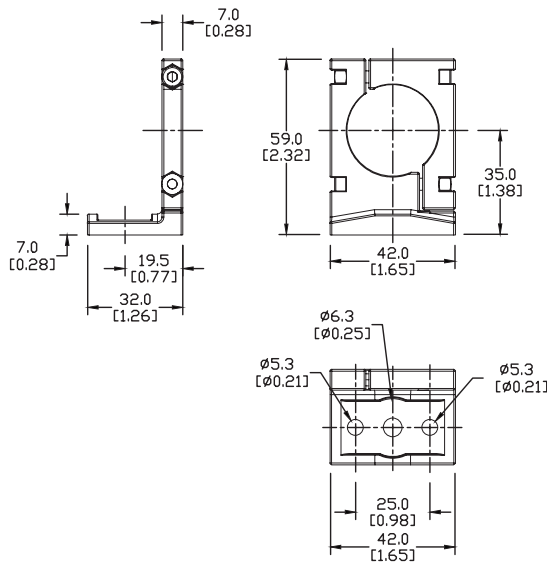


Contrinex Safety Light Curtains Accessories

Mounting bracket



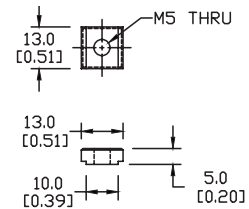
YXW-0001-000



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

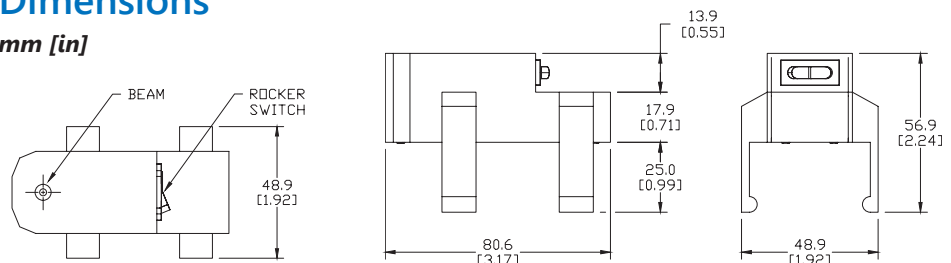


YXL-0001-000

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 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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