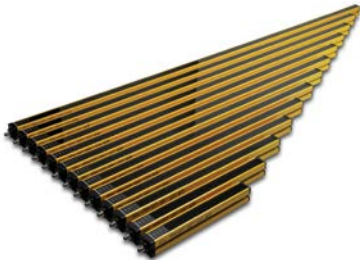# Contrinex Safety Light Curtains Hand-safe

Safety light curtain with 30 mm resolution

- Protective height from 279mm to 1827mm
- Operating distance up to 12m
- M12 quick-disconnect (order cable separately)
- Dual PNP outputs
- Sold as sender/receiver kits

- Mounting brackets included with all units
- Instruction manual and testing rod included with sender unit
- IP65, IP67 rated
- Type 4 and Category 4 PLe

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-30K4-0250-G012	$578.00	274 [10.79]	350 [13.78]	380 [14.96]	17	45 (sender) 85 (receiver)	5.2	142	96%	1500g 3.3 lb
YBB-30K4-0400-G012	$715.00	403 [15.87]	479 [18.86]	509 [20.04]	25	45 (sender) 85 (receiver)	6.8	126	96%	2040g 4.50 lb
YBB-30K4-0500-G012	$829.00	532 [20.94]	608 [23.94]	638 [25.12]	33	45 (sender) 90 (receiver)	8.4	114	96%	2600g 5.74 lb
YBB-30K4-0700-G012	$941.00	661 [26.02]	737 [29.02]	767 [30.20]	41	45 (sender) 95 (receiver)	10	104	95%	3160g 6.96 lb
YBB-30K4-0800-G012	$1,049.00	790 [31.10]	866 [34.09]	896 [35.28]	49	45 (sender) 100 (receiver)	11.6	96	95%	3700g 8.16 lb
YBB-30K4-0900-G012	$1,162.00	919 [36.18]	995 [39.17]	1025 [40.35]	57	45 (sender) 100 (receiver)	13.2	89	95%	4260g 9.4 lb
YBB-30K4-1000-G012	$1,234.00	1048 [41.26]	1124 [44.25]	1154 [45.43]	65	45 (sender) 105 (receiver)	14.8	83	95%	4800g 10.58 lb
YBB-30K4-1200-G012	$1,299.00	1177 [46.34]	1253 [49.33]	1283 [50.51]	73	45 (sender) 110 (receiver)	16.4	77	95%	5360 [11.82]
YBB-30K4-1300-G012	$1,327.00	1306 [51.42]	1382 [54.41]	1412 [55.59]	81	45 (sender) 110 (receiver)	18	73	95%	5920 [13.05]
YBB-30K4-1400-G012	$1,458.00	1435 [56.49]	1511 [59.49]	1541 [60.67]	89	45 (sender) 115 (receiver)	19.6	69	95%	6460 [14.24]
YBB-30K4-1600-G012	$1,596.00	1564 [61.58]	1640 [64.57]	1670 [65.75]	97	45 (sender) 120 (receiver)	21.2	65	94%	7020 [15.48]
YBB-30K4-1700-G012	$1,653.00	1693 [66.65]	1769 [69.65]	1799 [70.83]	105	45 (sender) 125 (receiver)	22.8	62	94%	7560 [16.67]
YBB-30K4-1800-G012	$1,748.00	1822 [71.73]	1898 [74.72]	1928 [75.91]	113	45 (sender) 130 (receiver)	24.4	59	94%	8120 [17.90]

YBB-30 Series Safety Light Curtain Selection Table

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

Dimensions

mm [in]
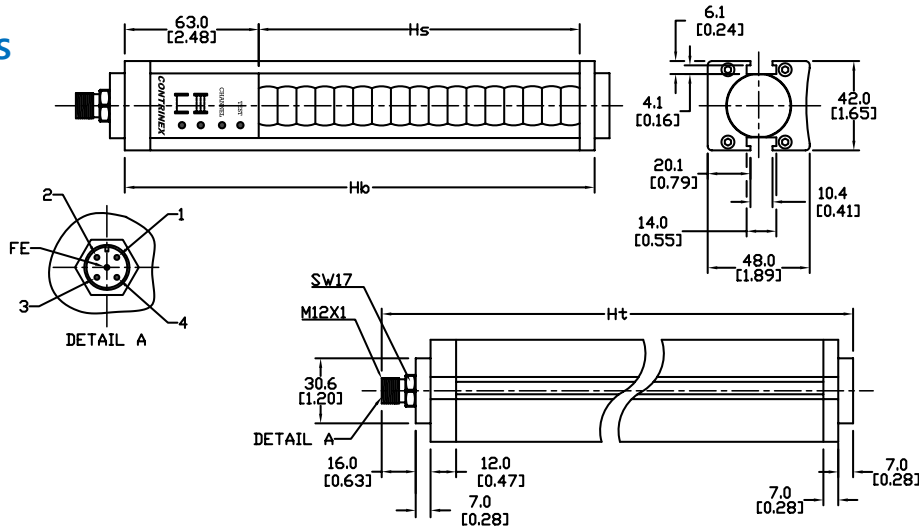
Pin outs

| 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.

Safety Electrical Components tESC-41

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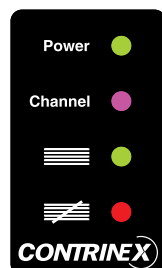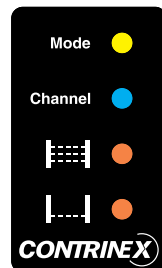
Sender		
LED	Finger & hand protection (YBB)	
Mode	Yellow when test mode is active	
Channel	Blue when channel 1 is selected	
	Purple when channel 2 is selected	
Alignment	Steady orange when the screen is not fully aligned	
	Flashing orange when the first third of the screen is aligned	
	Off when screen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

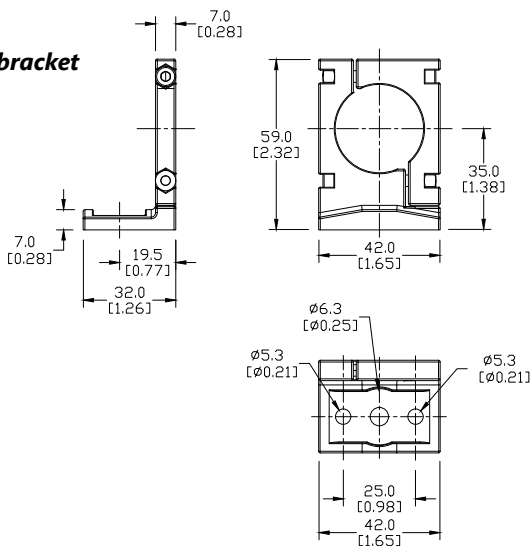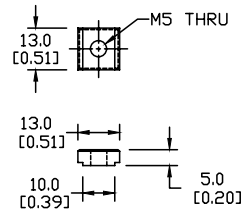| Safety Light Curtains Accessories Overview			
Part Number	Price	Description	Use With
YXL-0001-000	$294.00	Laser alignment tool for safety light curtains, class 2 laser, range up to 50 meters, useable and clippable to YBB and YCA light curtains models, 2 AAA batteries included.	YBB Series YCA Series
YXW-0001-000	$8.25	Safety light curtain mounting brackets for top and bottom mounting. Plastic. 2/pk.	
YXW-0003-000	$8.25	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

7.0 [0.28]
59.0 [2.32]
35.0 [1.38]
42.0 [1.65]
7.0 [0.28]
19.5 [0.77]
32.0 [1.26]
Ø6.3 [Ø0.25]
Ø5.3 [Ø0.21]
Ø5.3 [Ø0.21]
25.0 [0.98]
42.0 [1.65]

T-Nuts for side mounting

M5 THRU
13.0 [0.51]
13.0 [0.51]
10.0 [0.39]
5.0 [0.20]

Contrinex Safety Light Curtains Accessories

Mounting bracket

YXW-0001-000

7.0 [0.28]

59.0 [2.32]

35.0 [1.38]

7.0 [0.28]

19.5 [0.77]

32.0 [1.26]

42.0 [1.65]

ø6.3 [ø0.25]

ø5.3 [ø0.21]

ø5.3 [ø0.21]

25.0 [0.98]

42.0 [1.65]
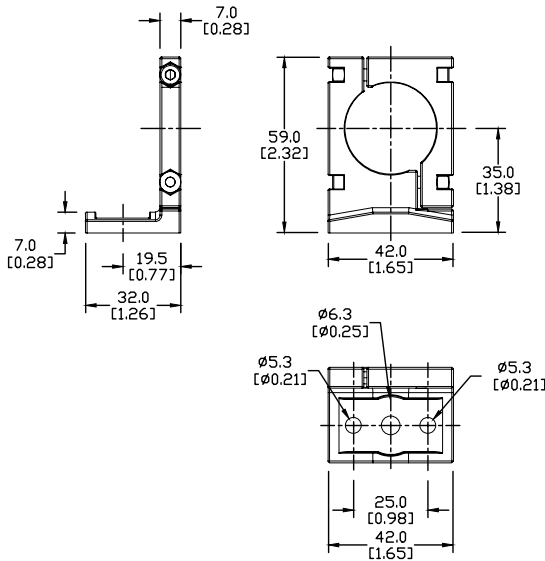
T-Nuts for side mounting

YXW-0003-000

M5 THRU

13.0 [0.51]

13.0 [0.51]

10.0 [0.39]

5.0 [0.20]
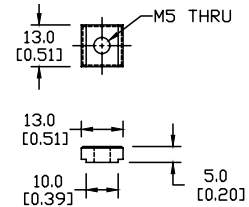
Laser Alignment Tool

- 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]

BEAM

ROCKER SWITCH

48.9 [1.92]

13.9 [0.55]

17.9 [0.71]

25.0 [0.99]

80.6 [3.17]

56.9 [2.24]

48.9 [1.92]
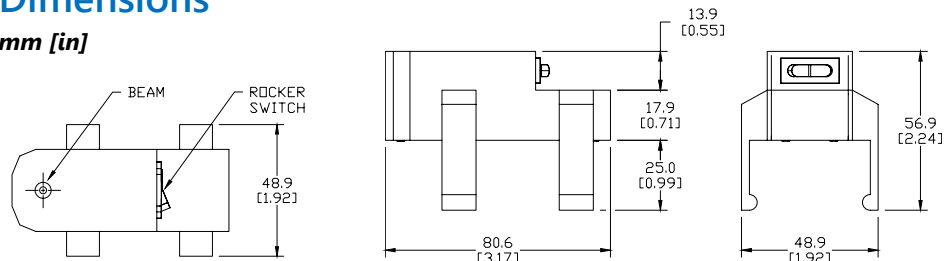
See our website www.AutomationDirect.com for complete engineering drawings.

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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