

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

YBB-30 Series Safety Light Curtain Selection Table

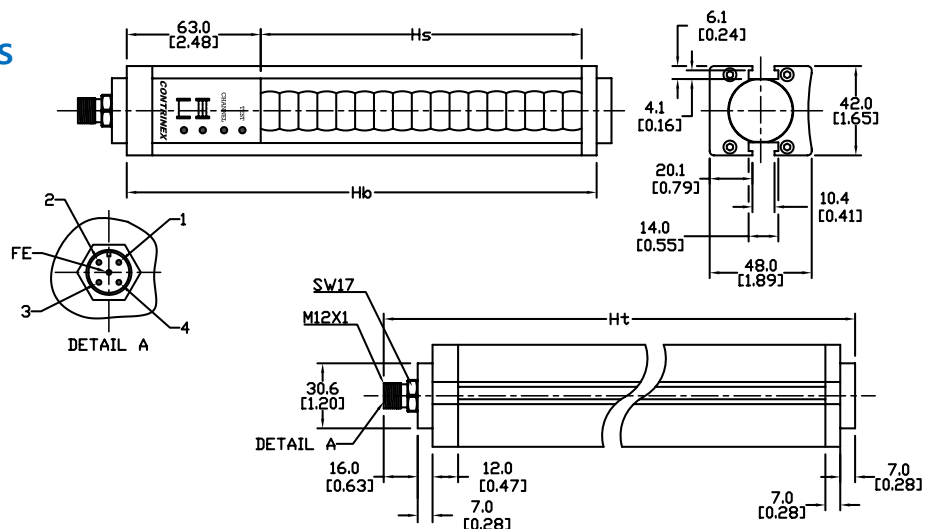
| Part Number | Price | Protective Height Hs mm [in] | Housing Height Hb mm [in] | Total Height Ht mm [in] | Number of Beams | Current Consumption [mA] | Response Time [ms] | MTTFd (years) | DCavg | Product Weight per Unit |
|---|------------|------------------------------|---------------------------|-------------------------|-----------------|-------------------------------|--------------------|---------------|-------|-------------------------|
| <u>YBB-30K4-0250-G012</u> | \$578.00 | 274 [10.79] | 350 [13.78] | 380 [14.96] | 17 | 45 (sender) 85 (receiver) | 5.2 | 142 | 96% | 1500g 3.3 lb |
| <u>YBB-30K4-0400-G012</u> | \$715.00 | 403 [15.87] | 479 [18.86] | 509 [20.04] | 25 | 45 (sender) 85 (receiver) | 6.8 | 126 | 96% | 2040g 4.50 lb |
| <u>YBB-30K4-0500-G012</u> | \$829.00 | 532 [20.94] | 608 [23.94] | 638 [25.12] | 33 | 45 (sender) 90 (receiver) | 8.4 | 114 | 96% | 2600g 5.74 lb |
| <u>YBB-30K4-0700-G012</u> | \$941.00 | 661 [26.02] | 737 [29.02] | 767 [30.20] | 41 | 45 (sender) 95 (receiver) | 10 | 104 | 95% | 3160g 6.96 lb |
| <u>YBB-30K4-0800-G012</u> | \$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 |
| <u>YBB-30K4-0900-G012</u> | \$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 |
| <u>YBB-30K4-1000-G012</u> | \$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 |
| <u>YBB-30K4-1200-G012</u> | \$1,299.00 | 1177 [46.34] | 1253 [49.33] | 1283 [50.51] | 73 | 45 (sender) 110 (receiver) | 16.4 | 77 | 95% | 5360 [11.82] |
| <u>YBB-30K4-1300-G012</u> | \$1,327.00 | 1306 [51.42] | 1382 [54.41] | 1412 [55.59] | 81 | 45 (sender) 110 (receiver) | 18 | 73 | 95% | 5920 [13.05] |
| <u>YBB-30K4-1400-G012</u> | \$1,458.00 | 1435 [56.49] | 1511 [59.49] | 1541 [60.67] | 89 | 45 (sender) 115 (receiver) | 19.6 | 69 | 95% | 6460 [14.24] |
| <u>YBB-30K4-1600-G012</u> | \$1,596.00 | 1564 [61.58] | 1640 [64.57] | 1670 [65.75] | 97 | 45 (sender) 120 (receiver) | 21.2 | 65 | 94% | 7020 [15.48] |
| <u>YBB-30K4-1700-G012</u> | \$1,653.00 | 1693 [66.65] | 1769 [69.65] | 1799 [70.83] | 105 | 45 (sender) 125 (receiver) | 22.8 | 62 | 94% | 7560 [16.67] |
| <u>YBB-30K4-1800-G012</u> | \$1,748.00 | 1822 [71.73] | 1898 [74.72] | 1928 [75.91] | 113 | 45 (sender) 130 (receiver) | 24.4 | 59 | 94% | 8120 [17.90] |

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.

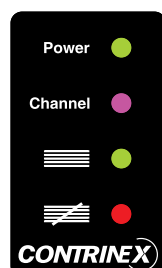
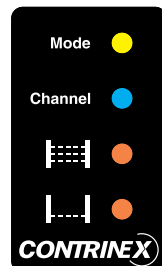
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YBB-30 Series Safety Light Curtain Specifications

| | |
|--|--|
| Resolution | 30mm |
| Safety Level | Category 4, PLe (EN/ISO 13849-1). Type 4 (IEC 61496-1/2) |
| Beam Axis Interval | 16mm |
| Supply Voltage | 24VDC \pm 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 |
|-------------------------------------|----------|---|--------------------------|
| <u>YXL-0001-000</u> | \$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 |
| <u>YXW-0001-000</u> | \$8.25 | Safety light curtain mounting brackets for top and bottom mounting. Plastic. 2/pk. | |
| <u>YXW-0003-000</u> | \$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](#)



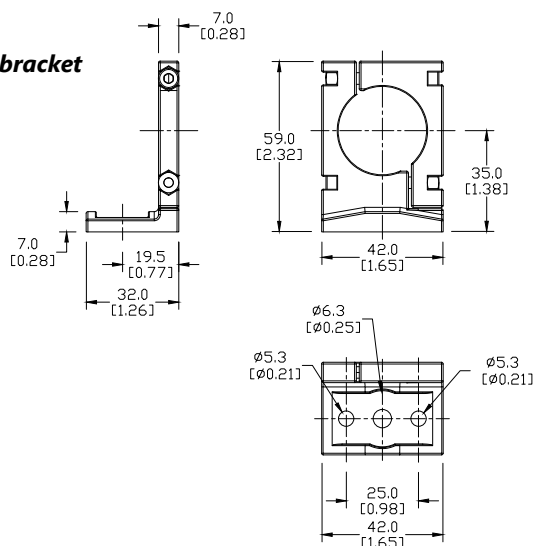
[YXW-0003-000](#)



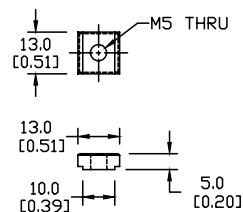
[YXL-0001-000](#)

Dimensions mm [in]

Mounting bracket



T-Nuts for side mounting

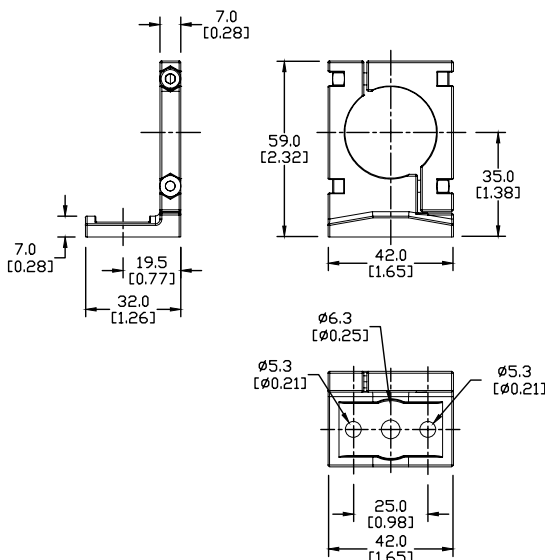


Contrinex Safety Light Curtains Accessories

Mounting bracket



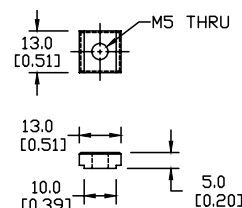
YXW-0001-000



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

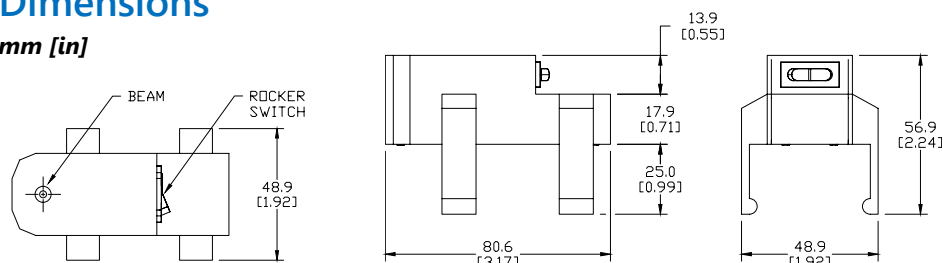


YXL-0001-000

| 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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