

# SAFETY LIGHT CURTAIN

## YBB-30□2-□□□□-G012


**RESOLUTION 30 MM**
**TYPE 2 / PL c**

### OUTSTANDING FEATURES

- Protective height: 150 mm ... 1827 mm
- Operating range: 0.25 ... 12 m
- Category 2, PL c according to EN/ISO 13849-1
- Type 2 according to IEC 61496-1/2
- Optically synchronized units
- Permanent autocontrol

### TECHNICAL DATA (at +23°C ±5°C, 24 VDC)

Resolution	30 mm
Beam axis interval	16 mm
Effective aperture angle	< ± 2.5° (when operating distance ≥ 3 m)
Operating range	0.25 ... 12 m
Housing size	42 mm x 48 mm x Ht
Total height (Ht)	see type-specific data (page 2)
Housing height (Hb)	see type-specific data (page 2)
Protective height (Hs)	see type-specific data (page 2)
Number of beams	see type-specific data (page 2)
Response time	see type-specific data (page 2)
Supply voltage	24 VDC ± 20 %
Current consumption	see type-specific data (page 2)
Dissipated power	see type-specific data (page 2)
Polarity	2 PNP outputs
Output protection	short-circuit, overload protected
Output monitoring	cross-circuit monitored
Output current	max. 200 mA per output (at 50 °C / 122 °F)
Output voltage ON min.	-1.0 V of the operating voltage
Output voltage OFF max.	1.0 V
Output monitoring frequency	10 Hz
Leakage current when OFF state	< 1 mA
Maximum load inductance	100 mH
Sender wavelength	IR 850 nm
Safety level	Category 2, Type 2 (IEC 61496-1/2), PL c, SIL 1 (IEC 61508) pending (see also type-specific data on page 2)
Electrical protection class	III (IEC 61140)
Startup delay	< 0.5 s
Vibration resistance	10 to 55 Hz, 0.35 mm amplitude, 1 octave/min., 20 sweeps for each axis
Shock resistance	10 g during 16 ms, 1000 times for each axis
Light immunity	incandescent lamp: 3000 lx max. (light intensity on receiver surface); xenon flash tube: flash duration 1.2 ms max. with a frequency of 2 Hz max. (IEC 61496-2)
Ambient temperature range	0 ... +50°C (+32 ... +122°F)
Storage temperature range	-25 ... +70°C (-13 ... +158°F)
Air humidity	15 ... 95 % (non-condensing)
Enclosure rating	IP65 + IP67 (EN 60529/A1)
Housing material	aluminum profile, PMMA front screen
Material of upper and lower cover	PA + 30% fiberglass
Cable runs	100 m max. (at 10 nF capacitive load)
Weight	see type-specific data (page 2)
Reference standards: safety	IEC 61496-1, IEC 61496-2, EN 60204-1, EN 50178
environment	EN 60068-2-1,2,3,6,29
EMC	EN 61000-4-2,3,4,5,6,11
radio disturbance	EN 55011/A2

**TYPE-SPECIFIC DATA**

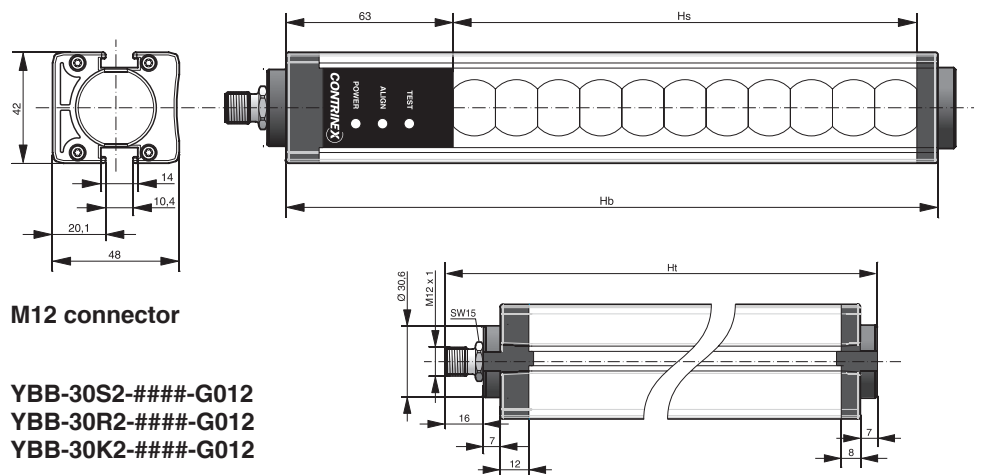
BEAM RESOLUTION: 30 MM

Part reference	Protective Height Hs [mm]	Housing Height Hb [mm]	Total Height Ht [mm]	Number of Beams	Current Consumption [mA max.]*	Response Time [ms]	MTTFa [years]	DCavg	Dissipated power [W max.]*	Weight [g]
YBB-30x2-0150-G012	150	221	251	9	20 (S)/50 (R)	14	78	91%	0.6 (S)/1.5 (R)	520
YBB-30x2-0250-G012	279	350	380	17	22 (S)/52 (R)	18	65	92%	0.7 (S)/1.5 (R)	805
YBB-30x2-0400-G012	408	479	509	25	23 (S)/54 (R)	22	55	93%	0.7 (S)/1.6 (R)	1090
YBB-30x2-0500-G012	537	608	638	33	24 (S)/55 (R)	26	48	94%	0.7 (S)/1.6 (R)	1370
YBB-30x2-0700-G012	666	737	767	41	25 (S)/55 (R)	30	42	94%	0.8 (S)/1.6 (R)	1660
YBB-30x2-0800-G012	795	866	896	49	25 (S)/56 (R)	34	38	95%	0.8 (S)/1.6 (R)	1945
YBB-30x2-0900-G012	924	995	1025	57	25 (S)/56 (R)	38	34	95%	0.8 (S)/1.6 (R)	2230
YBB-30x2-1000-G012	1053	1124	1154	65	25 (S)/56 (R)	42	32	95%	0.8 (S)/1.6 (R)	2515
YBB-30x2-1200-G012	1182	1253	1283	73	26 (S)/57 (R)	46	29	96%	0.8 (S)/1.7 (R)	2800
YBB-30x2-1300-G012	1311	1382	1412	81	26 (S)/57 (R)	50	27	96%	0.8 (S)/1.7 (R)	3085
YBB-30x2-1400-G012	1440	1511	1541	89	27 (S)/57 (R)	54	25	96%	0.8 (S)/1.7 (R)	3370
YBB-30x2-1600-G012	1569	1640	1670	97	27 (S)/57 (R)	58	23	96%	0.8 (S)/1.7 (R)	3655
YBB-30x2-1700-G012	1698	1769	1799	105	27 (S)/58 (R)	62	22	96%	0.8 (S)/1.7 (R)	3940
YBB-30x2-1800-G012	1827	1898	1928	113	27 (S)/58 (R)	66	21	97%	0.8 (S)/1.7 (R)	4225

x = S for sender / R for receiver / K for kit (sender + receiver)

\* Excl. load

**HOUSING SIZE**



**M12 connector**

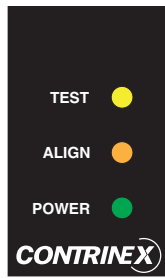
**YBB-30S2-####-G012**  
**YBB-30R2-####-G012**  
**YBB-30K2-####-G012**

**PART REFERENCE**

Output type	Sender	Receiver	Kit (Sender + Receiver)
PNP / Connector M12	YBB-30S2-0150-G012	YBB-30R2-0150-G012	YBB-30K2-0150-G012
PNP / Connector M12	YBB-30S2-0250-G012	YBB-30R2-0250-G012	YBB-30K2-0250-G012
PNP / Connector M12	YBB-30S2-0400-G012	YBB-30R2-0400-G012	YBB-30K2-0400-G012
PNP / Connector M12	YBB-30S2-0500-G012	YBB-30R2-0500-G012	YBB-30K2-0500-G012
PNP / Connector M12	YBB-30S2-0700-G012	YBB-30R2-0700-G012	YBB-30K2-0700-G012
PNP / Connector M12	YBB-30S2-0800-G012	YBB-30R2-0800-G012	YBB-30K2-0800-G012
PNP / Connector M12	YBB-30S2-0900-G012	YBB-30R2-0900-G012	YBB-30K2-0900-G012
PNP / Connector M12	YBB-30S2-1000-G012	YBB-30R2-1000-G012	YBB-30K2-1000-G012
PNP / Connector M12	YBB-30S2-1200-G012	YBB-30R2-1200-G012	YBB-30K2-1200-G012
PNP / Connector M12	YBB-30S2-1300-G012	YBB-30R2-1300-G012	YBB-30K2-1300-G012
PNP / Connector M12	YBB-30S2-1400-G012	YBB-30R2-1400-G012	YBB-30K2-1400-G012
PNP / Connector M12	YBB-30S2-1600-G012	YBB-30R2-1600-G012	YBB-30K2-1600-G012
PNP / Connector M12	YBB-30S2-1700-G012	YBB-30R2-1700-G012	YBB-30K2-1700-G012
PNP / Connector M12	YBB-30S2-1800-G012	YBB-30R2-1800-G012	YBB-30K2-1800-G012

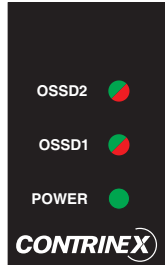
## LED INDICATORS

LED indicators on the YBB **sender** unit



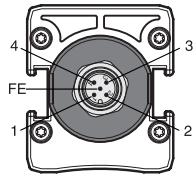
- Power : **green** when power is ON
- Alignment : **steady orange** when the lowest beam is not aligned  
**quick blinking orange** when the lowest beam is aligned  
**slow blinking orange** when at least 6 beams are aligned  
**OFF** when screen is fully aligned
- Test : **yellow** when intrusion simulation is active  
**OFF** when there is no intrusion simulation

LED indicators on the YBB **receiver** unit



- Power : **green** when power is ON
- OSSD1 : **green** when OSSD1 is ON  
**red** when OSSD1 is OFF
- OSSD2 : **green** when OSSD2 is ON  
**red** when OSSD2 is OFF

## PIN ASSIGNMENT



### M12 connector

ASSIGNMENT	FUNCTION	PINS/WIRES ON SENDER		PINS/WIRES ON RECEIVER	
		M12	OPEN CABLE	M12	OPEN CABLE
Power supply	24 VDC	1	brown	1	brown
Power supply	0 V	3	blue	3	blue
Test mode	0 V: test active 24 V: test inactive	4	black	-	-
Output	OSSD1	-	-	2	white
Output	OSSD2	-	-	4	black
Functional earth	Shield	FE	gray	FE	gray

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