

# SAFETY LIGHT CURTAIN

## YBB-30 □2-1600-G012



RESOLUTION 30 MM

TYPE 2 / PL c

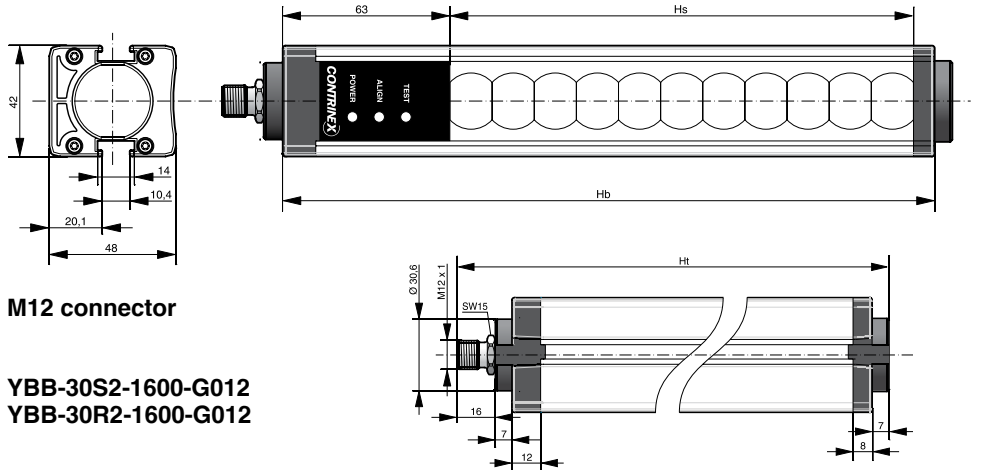
### OUTSTANDING FEATURES

- Protective height: 1569 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
Dimensions	42 mm x 48 mm x Ht (total height with M12 connector)
Total height (Ht)	1670 mm
Housing height (Hb)	1640 mm
Protective height (Hs)	1569 mm
Number of beams	97
Response time	58 ms
Supply voltage range	24 VDC ± 20 %
Current consumption	sender: 27 mA max. / receiver: 57 mA max. (excl. load)
Dissipated power	sender: 0.8 W max. / receiver: 1.7 W max. (excl. load)
Output type	2 PNP outputs
Output protection	short-circuit, overload protected
Output monitoring	cross-circuit monitored
Load 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 MTTF <sub>d</sub> = 23 years, DC <sub>avg</sub> = 96% (EN/ISO 13849-1) SIL 1 (IEC 61508) pending
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. (TS 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)
Degree of protection	IP 65 + IP 67 (EN 60529/A1)
Housing material	aluminum profile, PMMA front screen
Material of upper and lower cover	PA + 30% fiberglass
Cable runs	10 m max. (at 10 nF capacitive load)
Weight	sender: 3655 g / receiver: 3640 g
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

### DIMENSIONS



M12 connector

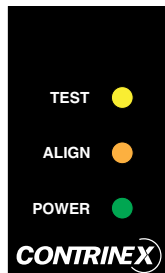
YBB-30S2-1600-G012  
YBB-30R2-1600-G012

### PART REFERENCE

Output type	Sender	Receiver
PNP / M12 connector	YBB-30S2-1600-G012	YBB-30R2-1600-G012

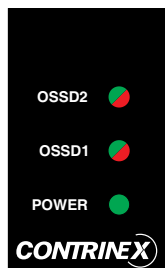
### LED INDICATORS

LED indicators on the YBB **sender** unit



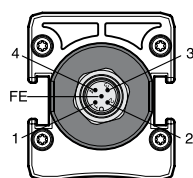
- Power : **green** when power is ON
- Align : **steady orange** when the lowest beam is not aligned  
**quick blinking orange** when the lowest beam is aligned  
**slow blinking orange** when at least 6 beams are aligned  
**off** when screen is fully aligned
- Test : **yellow** when intrusion simulation 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 ON SENDER	PINS ON RECEIVER
		M12	M12
Power supply	24 VDC	1	1
Power supply	0 V	3	3
Test mode	0 V: test active 24 V: test inactive	4	-
Output	OSSD1	-	2
Output	OSSD2	-	4
Functional earth	Shield	FE	FE