

# SAFETY LIGHT CURTAIN

## YBBS-30□2-□□□□-P012



RESOLUTION 30 MM

TYPE 2 / PL c

### OUTSTANDING FEATURES

- Protective height: 170 mm ... 1610 mm
- Operating range: 0.25 ... 8 m
- No blind zone
- Type 2 according to IEC 61496-1/2
- Category 2, PL c according to EN/ISO 13849-1
- Permanent autocontrol and optical synchronization

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

Resolution	30 mm
Beam axis interval	20 mm
Effective aperture angle	< ± 5° (when operating distance ≥ 3 m)
Operating range	0.25 ... 8 m
Housing size	26 mm x 26 mm x Ht
Total height (Ht)	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. 400 mA per output (at 50 °C / 122 °F)
Output voltage ON min.	-1.8 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 (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 ... +55°C (+32 ... +131°F)
Storage temperature range	-25 ... +70°C (-13 ... +158°F)
Air humidity	15 ... 95 % (non-condensing)
Enclosure rating	IP65 (EN 60529/A1)
Housing material	aluminum profile, PC 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

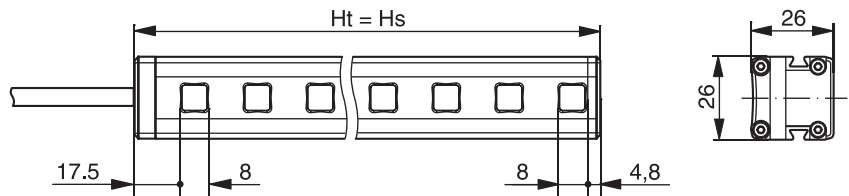
BEAM RESOLUTION: 30 MM

Part reference	Protective Height Hs [mm]	Total Height Ht [mm]	Number of Beams	Current Consumption [mA max.]*	Response Time [ms]	MTTF <sub>d</sub> [years]	DC <sub>avg</sub>	Dissipated power [W max.]*	Weight [g]
YBBS-30x2-0170-P012	170	170	8	25 (S)/17 (R)	6	71	92.3 %	0.7 (S)/0.5 (R)	150
YBBS-30x2-0330-P012	330	330	16	31 (S)/18 (R)	9	62	93.1 %	0.9 (S)/0.5 (R)	260
YBBS-30x2-0490-P012	490	490	24	35 (S)/19 (R)	11	56	93.7 %	1.0 (S)/0.5 (R)	370
YBBS-30x2-0650-P012	650	650	32	37 (S)/20 (R)	14	51	94.2 %	1.1 (S)/0.6 (R)	490
YBBS-30x2-0810-P012	810	810	40	39 (S)/22 (R)	16	46	94.6 %	1.1 (S)/0.6 (R)	600
YBBS-30x2-0970-P012	970	970	48	40 (S)/23 (R)	19	42	94.9 %	1.2 (S)/0.7 (R)	710
YBBS-30x2-1130-P012	1130	1130	56	40 (S)/25 (R)	21	39	95.2 %	1.2 (S)/0.7 (R)	820
YBBS-30x2-1290-P012	1290	1290	64	41 (S)/26 (R)	24	37	95.4 %	1.2 (S)/0.7 (R)	930
YBBS-30x2-1450-P012	1450	1450	72	41 (S)/27 (R)	26	34	95.7 %	1.2 (S)/0.8 (R)	1040
YBBS-30x2-1610-P012	1610	1610	80	42 (S)/29 (R)	29	32	95.9 %	1.2 (S)/0.8 (R)	1150

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

\* Excl. load

## HOUSING SIZE



### M12 pigtail

**YBBS-30S2-####-P012**  
**YBBS-30R2-####-P012**  
**YBBS-30K2-####-P012**

## PART REFERENCE

Output type	Sender	Receiver	Kit (Sender + Receiver)
PNP / Pigtail M12	YBBS-30S2-0170-P012	YBBS-30R2-0170-P012	YBBS-30K2-0170-P012
PNP / Pigtail M12	YBBS-30S2-0330-P012	YBBS-30R2-0330-P012	YBBS-30K2-0330-P012
PNP / Pigtail M12	YBBS-30S2-0490-P012	YBBS-30R2-0490-P012	YBBS-30K2-0490-P012
PNP / Pigtail M12	YBBS-30S2-0650-P012	YBBS-30R2-0650-P012	YBBS-30K2-0650-P012
PNP / Pigtail M12	YBBS-30S2-0810-P012	YBBS-30R2-0810-P012	YBBS-30K2-0810-P012
PNP / Pigtail M12	YBBS-30S2-0970-P012	YBBS-30R2-0970-P012	YBBS-30K2-0970-P012
PNP / Pigtail M12	YBBS-30S2-1130-P012	YBBS-30R2-1130-P012	YBBS-30K2-1130-P012
PNP / Pigtail M12	YBBS-30S2-1290-P012	YBBS-30R2-1290-P012	YBBS-30K2-1290-P012
PNP / Pigtail M12	YBBS-30S2-1450-P012	YBBS-30R2-1450-P012	YBBS-30K2-1450-P012
PNP / Pigtail M12	YBBS-30S2-1610-P012	YBBS-30R2-1610-P012	YBBS-30K2-1610-P012

## LED INDICATORS

LED indicators on the YBBS **sender** unit



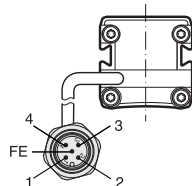
- Power : **green** when power is ON
- Alignment : **steady orange** when the lowest beam is not aligned  
**quick blinking orange** when the lowest beam is aligned  
**slow blinking orange** when at least 6 beams are aligned  
**OFF** when screen is fully aligned
- Test : **yellow** when intrusion simulation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

LED indicators on the YBBS **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 pigtail, 0.3 m, 5-pins**

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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