

# 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

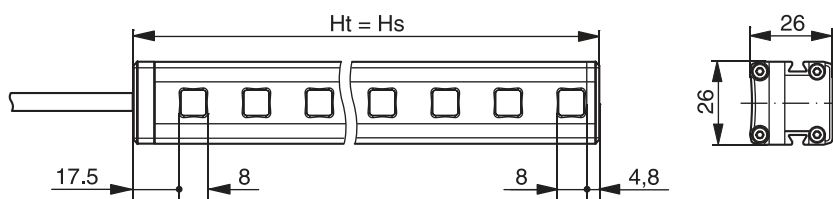
BEAM RESOLUTION: 30 MM

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



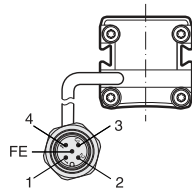
- Power : **green** when power is ON
- Alignment : **steady orange** when the lowest beam is not aligned  
**quick blinking orange** when the lowest beam is aligned  
**slow blinking orange** when at least 6 beams are aligned  
**OFF** when screen is fully aligned
- Test : **yellow** when intrusion simulation 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

Operators of the products we supply are responsible for compliance with measures for the protection of persons. The use of our equipment in applications where the safety of persons might be at risk is only authorized if the operator observes and implements separate, appropriate and necessary measures for the protection of persons and machines. Terms of delivery and rights to change design reserved. Please check our website for updates.