CONTRINEX

DATA SHEET

SAFETY LIGHT CURTAIN

YBB-30□4-□□□□-G012

RESOLUTION 30 MM TYPE 4 / PL e

OUTSTANDING FEATURES

- Protective height: 274 mm … 1822 mm
- Operating range: 0.25 … 12 m
- Category 4, PL e according to EN/ISO 13849-1 (former EN 954-1)
- Type 4 according to IEC 61496-1/2
- 2-channel selection
- 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		500 Hz
Leakage current when OFF state		< 1 mA
Maximum load inductance		100 mH
Sender wavelength		IR 880 nm
Safety level		Category 4, Type 4 (IEC 61496-1/2), PL e (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		-35 … +60°C (-31 … +140°F)
Storage temperature range		-40 … +70°C (-40 … +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

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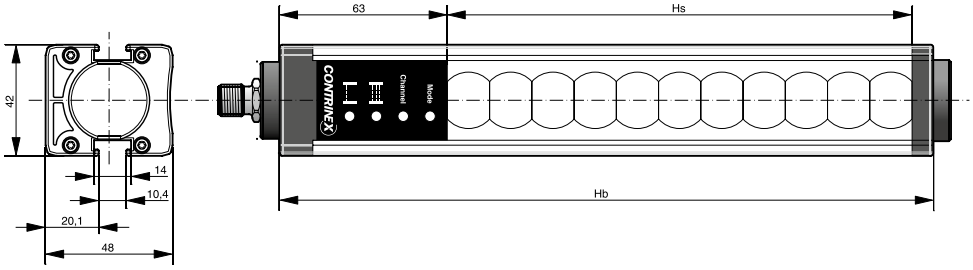
TYPE-SPECIFIC DATA

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]	MTTFd [years]	DCavg	Dissipated power [W max.]*	Weight [g]
YBB-30x4-0250-G012	274	350	380	17	45 (S)/85 (R)	5.2	142	96%	1.3 (S)/2.4 (R)	750
YBB-30x4-0400-G012	403	479	509	25	45 (S)/85 (R)	6.8	126	96%	1.3 (S)/2.4 (R)	1020
YBB-30x4-0500-G012	532	608	638	33	45 (S)/90 (R)	8.4	114	96%	1.3 (S)/2.6 (R)	1300
YBB-30x4-0700-G012	661	737	767	41	45 (S)/95 (R)	10	104	95%	1.3 (S)/2.7 (R)	1580
YBB-30x4-0800-G012	790	866	896	49	45 (S)/100 (R)	11.6	96	95%	1.3 (S)/2.9 (R)	1850
YBB-30x4-0900-G012	919	995	1025	57	45 (S)/100 (R)	13.2	89	95%	1.3 (S)/2.9 (R)	2130
YBB-30x4-1000-G012	1048	1124	1154	65	45 (S)/105 (R)	14.8	83	95%	1.3 (S)/3.0 (R)	2400
YBB-30x4-1200-G012	1177	1253	1283	73	45 (S)/110 (R)	16.4	77	95%	1.3 (S)/3.2 (R)	2680
YBB-30x4-1300-G012	1306	1382	1412	81	45 (S)/110 (R)	18	73	95%	1.3 (S)/3.2 (R)	2960
YBB-30x4-1400-G012	1435	1511	1541	89	45 (S)/115 (R)	19.6	69	95%	1.3 (S)/3.3 (R)	3230
YBB-30x4-1600-G012	1564	1640	1670	97	45 (S)/120 (R)	21.2	65	94%	1.3 (S)/3.5 (R)	3510
YBB-30x4-1700-G012	1693	1769	1799	105	45 (S)/125 (R)	22.8	62	94%	1.3 (S)/3.6 (R)	3780
YBB-30x4-1800-G012	1822	1898	1928	113	45 (S)/130 (R)	24.4	59	94%	1.3 (S)/3.7 (R)	4060

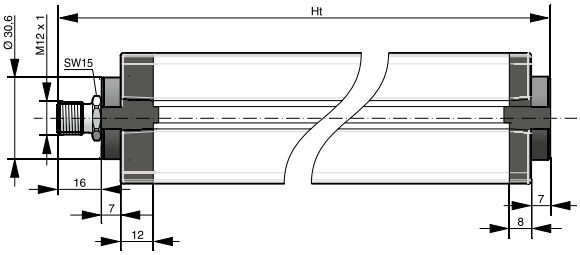
x = S for sender / R for receiver / K for kit (sender + receiver) * Excl. load

HOUSING SIZE



connector M12

YBB-30S4-####-G012
YBB-30R4-####-G012
YBB-30K4-####-G012



PART REFERENCE

Output type	Sender	Receiver	Kit (Sender + Receiver)
PNP / Connector M12	YBB-30S4-0250-G012	YBB-30R4-0250-G012	YBB-30K4-0250-G012
PNP / Connector M12	YBB-30S4-0400-G012	YBB-30R4-0400-G012	YBB-30K4-0400-G012
PNP / Connector M12	YBB-30S4-0500-G012	YBB-30R4-0500-G012	YBB-30K4-0500-G012
PNP / Connector M12	YBB-30S4-0700-G012	YBB-30R4-0700-G012	YBB-30K4-0700-G012
PNP / Connector M12	YBB-30S4-0800-G012	YBB-30R4-0800-G012	YBB-30K4-0800-G012
PNP / Connector M12	YBB-30S4-0900-G012	YBB-30R4-0900-G012	YBB-30K4-0900-G012
PNP / Connector M12	YBB-30S4-1000-G012	YBB-30R4-1000-G012	YBB-30K4-1000-G012
PNP / Connector M12	YBB-30S4-1200-G012	YBB-30R4-1200-G012	YBB-30K4-1200-G012
PNP / Connector M12	YBB-30S4-1300-G012	YBB-30R4-1300-G012	YBB-30K4-1300-G012
PNP / Connector M12	YBB-30S4-1400-G012	YBB-30R4-1400-G012	YBB-30K4-1400-G012
PNP / Connector M12	YBB-30S4-1600-G012	YBB-30R4-1600-G012	YBB-30K4-1600-G012
PNP / Connector M12	YBB-30S4-1700-G012	YBB-30R4-1700-G012	YBB-30K4-1700-G012
PNP / Connector M12	YBB-30S4-1800-G012	YBB-30R4-1800-G012	YBB-30K4-1800-G012

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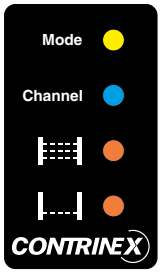
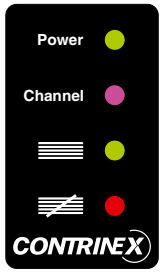
LED INDICATORS

LED indicators on the YBB **sender** unit



Test	:	**yellow** when test mode is active
Channel	:	**blue** when channel 1 is selected **purple** when channel 2 is selected
Alignment (full)	:	**steady orange** when the screen is not fully aligned **blinking orange** when the first third of the screen is aligned **OFF** when screen is fully aligned
Alignment (low beam)	:	**steady orange** when the lowest beam is not aligned **blinking orange** when the lowest beam is aligned **OFF** when screen is fully aligned

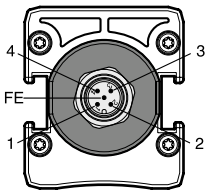
LED indicators on the YBB **receiver** unit



Power	:	**green** when power is ON
Channel	:	**blue** when channel 1 is selected **purple** when channel 2 is selected
Status ON	:	**green** when OSSD outputs are ON
Status OFF	:	**red** when OSSD outputs are 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 for channel 1 0 V for channel 2	1	brown	1	brown
Power supply	0 V for channel 1 24 VDC for channel 2	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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