

SAFETY ACCESS CONTROL BARRIER



YCA-50 □4-□□□□-G012



3 TO 6 BEAMS
BEAM GAP 300, 400 OR 500 MM

TYPE 4 / PL e

MAIN FEATURES

- Protective height: 832 ... 1532 mm
- Operating range: 1 ... 15 m / 10 ... 50 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)

Number of beams	3 to 6
Beam gap (Bg)	300, 400 or 500 mm
Effective aperture angle	< ± 2.5° (when operating distance ≥ 3 m)
Operating range	1 ... 15 m / 10 ... 50 m (can be configured)
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)
Height extension (He)	see type-specific data (page 2)
Response time	see type-specific data (page 2)
Supply voltage	24 VDC ± 15 %
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

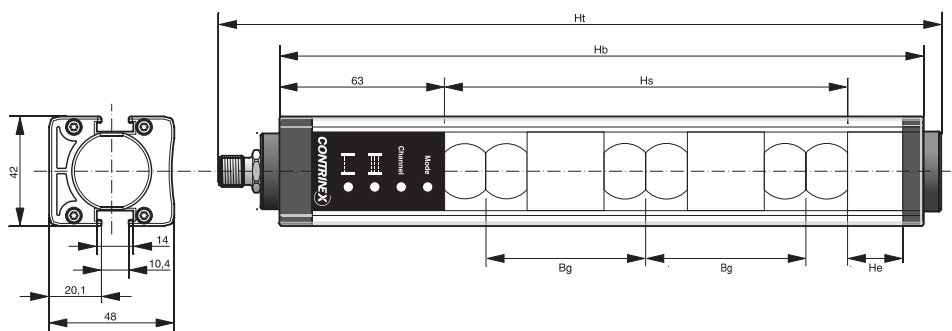
TYPE-SPECIFIC DATA

Part reference	Numb. of Beams	Beam Gap Bg [mm]	Protective Height Hs [mm]	Height Extension He [mm]	Housing Height Hb [mm]	Total Height Ht [mm]
YCA-50x4-4300-G012	4	300	932	121	1124	1154
YCA-50x4-5300-G012	5	300	1232	79	1382	1412
YCA-50x4-6300-G012	6	300	1532	37	1640	1670
YCA-50x4-3400-G012	3	400	832	92	995	1025
YCA-50x4-4400-G012	4	400	1232	79	1382	1412
YCA-50x4-3500-G012	3	500	1032	21	1124	1154

Part reference	Current Consumption [mA max.]*	Dissipated power [W max.]*	Response Time [ms]	MTTFd [years]	DCavg	Weight [g]
YCA-50x4-4300-G012	35 (S)/75 (R)	1.0 (S)/2.2 (R)	5.0	100	96.9%	2420
YCA-50x4-5300-G012	35 (S)/75 (R)	1.0 (S)/2.2 (R)	5.9	94	96.8%	2970
YCA-50x4-6300-G012	35 (S)/75 (R)	1.0 (S)/2.2 (R)	6.7	88	96.8%	3530
YCA-50x4-3400-G012	35 (S)/75 (R)	1.0 (S)/2.2 (R)	4.2	108	96.9%	2140
YCA-50x4-4400-G012	35 (S)/75 (R)	1.0 (S)/2.2 (R)	5.0	100	96.9%	2970
YCA-50x4-3500-G012	35 (S)/75 (R)	1.0 (S)/2.2 (R)	4.2	108	96.9%	2410

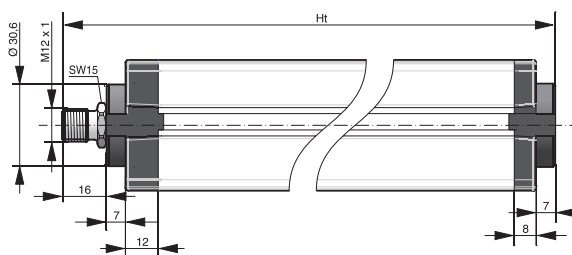
x = S for sender / R for receiver / K for kit (sender + receiver) * Excl. load

HOUSING SIZE



M12 connector

YCA-50S4-####-G012
YCA-50R4-####-G012
YCA-50K4-####-G012

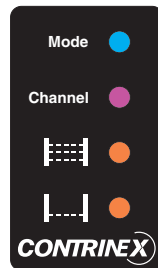


PART REFERENCE

Output type	Sender	Receiver	Kit (Sender + Receiver)
PNP / Connector M12	YCA-50S4-4300-G012	YCA-50R4-4300-G012	YCA-50K4-4300-G012
PNP / Connector M12	YCA-50S4-5300-G012	YCA-50R4-5300-G012	YCA-50K4-5300-G012
PNP / Connector M12	YCA-50S4-6300-G012	YCA-50R4-6300-G012	YCA-50K4-6300-G012
PNP / Connector M12	YCA-50S4-3400-G012	YCA-50R4-3400-G012	YCA-50K4-3400-G012
PNP / Connector M12	YCA-50S4-4400-G012	YCA-50R4-4400-G012	YCA-50K4-4400-G012
PNP / Connector M12	YCA-50S4-3500-G012	YCA-50R4-3500-G012	YCA-50K4-3500-G012

LED INDICATORS

LED indicators on the YCA **sender** unit



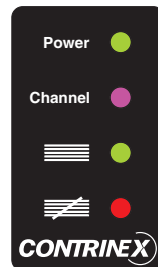
Operating range: **OFF** when max. operating range = 15 m
blue when max. operating range = 50 m
red or **purple** in case of wiring error

Channel : **blue** when channel 1 selected
purple when channel 2 selected

Alignment : **steady orange** when screen not fully aligned
blinking orange when first third of screen aligned
OFF when screen fully aligned

Alignment : **steady orange** when lowest beam not aligned
blinking orange when lowest beam aligned
OFF when screen fully aligned

LED indicators on the YCA **receiver** unit



Power : **green** when power ON

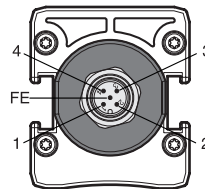
Channel : **blue** when channel 1 selected
purple when channel 2 selected

Status : **green** when OSSD outputs ON

Status : **red** when OSSD outputs 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
Operating range selection	24 VDC for 10...50m 0 V for 1...15m	4	black	-	-
Operating range selection	0 V for 10...50m 24 VDC for 1...15m	2	white	-	-
Output	OSSD1	-	-	2	white
Output	OSSD2	-	-	4	black
Functional earth	Shield	FE	gray	FE	gray

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