

# SAFETY ACCESS CONTROL BARRIER



**YCA-50** □4-5300-□□□□



5 BEAMS / BEAM GAP 300 MM

TYPE 4 / PL e

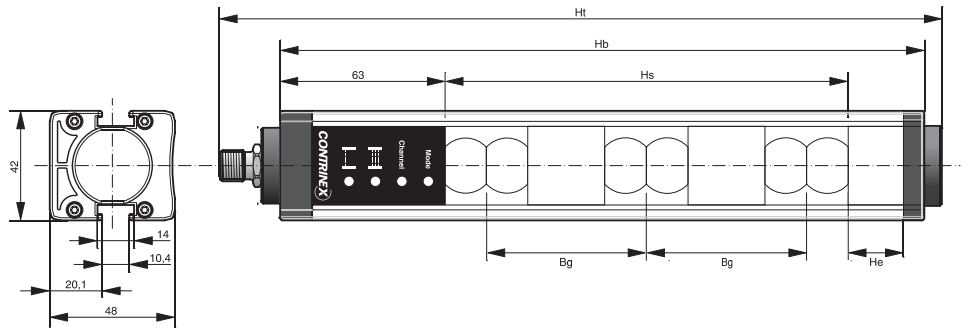
## MAIN FEATURES

- Protective height: 1232 mm
- Operating range: 1 ... 15 m / 10 ... 50 m
- Category 4, PL e according to 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)

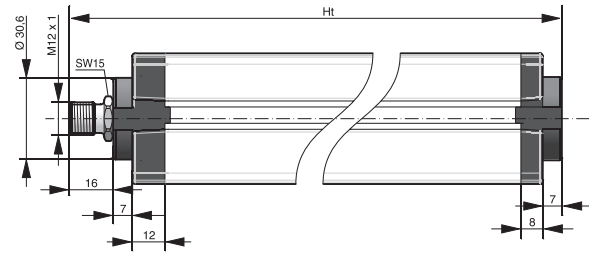
|                                   |   |
|-----------------------------------|---|
| Number of beams                   | 5   |
| Beam gap (Bg)                     | 300 mm  |
| Effective aperture angle          | < ± 2.5° (when operating distance ≥ 3 m)  |
| Operating range                   | 1 ... 15 m / 10 ... 50 m (can be configured)  |
| Dimensions                        | 42 mm x 48 mm x Ht (total height with M12 connector)  |
| Total height (Ht)                 | 1412 mm   |
| Housing height (Hb)               | 1382 mm   |
| Protective height (Hs)            | 1232 mm   |
| Height extension (He)             | 79 mm   |
| Response time                     | 5.9 ms  |
| Supply voltage range              | 24 VDC ± 15 %   |
| Current consumption               | sender: 35 mA max. / receiver: 75 mA max. (excl. load)  |
| Dissipated power                  | sender: 1.0 W max. / receiver: 2.2 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       | 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, MTTF <sub>d</sub> = 99 years, DC <sub>avg</sub> = 97% (EN/ISO 13849-1)  |
| 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         | -35 ... +60 °C (-31 ... +140 °F)  |
| Storage temperature range         | -40 ... +70 °C (-40 ... +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                            | 2970 g per unit (with M12 connector)  |
| 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**



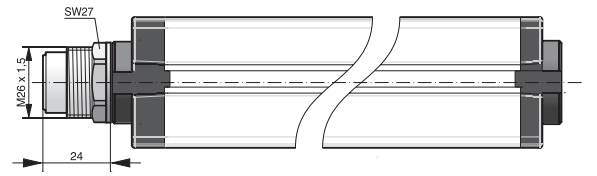
**M12 connector**

YCA-50S4-5300-G012  
YCA-50R4-5300-G012



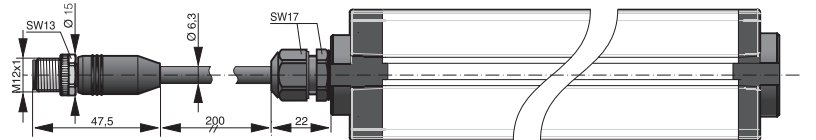
**M26 connector**

YCA-50S4-5300-G026  
YCA-50R4-5300-G026



**Pigtail M12**

YCA-50S4-5300-P012  
YCA-50R4-5300-P012



**Cable**

YCA-50S4-5300-D...  
YCA-50R4-5300-D...

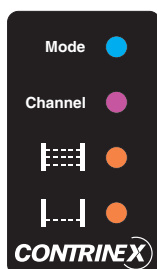


**PART REFERENCE**

| Output / Connection  | Sender             | Receiver           |
|----------------------|--------------------|--------------------|
| PNP / Connector M12  | YCA-50S4-5300-G012 | YCA-50R4-5300-G012 |
| PNP / Connector M26  | YCA-50S4-5300-G026 | YCA-50R4-5300-G026 |
| PNP / Pigtail M12    | YCA-50S4-5300-P012 | YCA-50R4-5300-P012 |
| PNP / PUR cable 2 m  | YCA-50S4-5300-D020 | YCA-50R4-5300-D020 |
| PNP / PUR cable 5 m  | YCA-50S4-5300-D050 | YCA-50R4-5300-D050 |
| PNP / PUR cable 10 m | YCA-50S4-5300-D100 | YCA-50R4-5300-D100 |

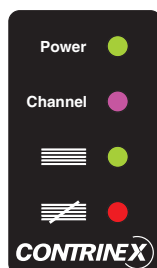
### LED INDICATORS

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  
flashing orange when first third of screen aligned  
OFF when screen fully aligned
- Alignment : steady orange when lowest beam not aligned  
flashing 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**



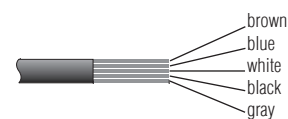
**M26 connector**



**Pigtail M12**



**cable**



| ASSIGNMENT                | FUNCTION                                  | PINS/WIRES ON SENDER |     |            | PINS/WIRES ON RECEIVER |     |            |
|---------------------------|---|----------------------|-----|------------|------------------------|-----|------------|
|                           |   | M12 / PIGTAIL        | M26 | OPEN CABLE | M12 / PIGTAIL          | M26 | OPEN CABLE |
| Power supply              | 24 VDC for channel 1<br>0 V for channel 2 | 1                    | 1   | brown      | 1                      | 1   | brown      |
| Power supply              | 0 V for channel 1<br>24 VDC for channel 2 | 3                    | 2   | blue       | 3                      | 2   | blue       |
| Operating range selection | 24 VDC for 10...50 m<br>0 V for 1...15 m  | 4                    | 3   | black      | -                      | -   | -          |
| Operating range selection | 0 V for 10...50 m<br>24 VDC for 1...15 m  | 2                    | 4   | white      | -                      | -   | -          |
| Output                    | OSSD1                                     | -                    | -   | -          | 2                      | 4   | white      |
| Output                    | OSSD2                                     | -                    | -   | -          | 4                      | 3   | black      |
| Functional earth          | Shield                                    | FE                   | FE  | gray       | FE                     | FE  | gray       |