

# XL96 Precision one-way light curtain

## APPLICATIONS

- Measuring size and position of objects: absolute and relative
- Detection of any shaped objects
- Hole detection
- Detection of objects in any positions
- Used in packing machines
- Detection of transparent objects (*only sensitivity level: 1, 2 or 3*)
- Developed for a rough industrial use



## FEATURES

- The special automatic calibration guarantees a safe operation.
- High immunity to all types of ambient light.

## FUNCTIONAL OVERVIEW

The product is an one-way light-curtain. This means the emitter and the receiver is mounted in separate housings.

The receiver housing contains two indication LEDs.

An orange LED to indicate the state "ready" and a red LED to indicate the state of control.

During an interruption of the light curtain the red LED lights up.

## CALIBRATION

The calibration starts automatically, when the operating voltage is switched on (variation **W**). During this time the red LED lights up.

- **DURING THE CALIBRATIONPROCESS; IT IS NOT ALLOWED THAT AN OBJECT IS IN THE WORKING AREA OF THE LIGHT CURTAIN!**  
*Otherwise wrong conditions would be stored in the calibration data.*
- **THE POSITION OF TRANSMITTER AND RECEIVER HAS NOT TO BE CHANGED AFTER THE CALIBRATION!**

After the calibration the orange LED lights up.

## Attention!!!

After a new installation the red LED lights up. This means, the old calibration data have to be overwritten by a new CAL-order.

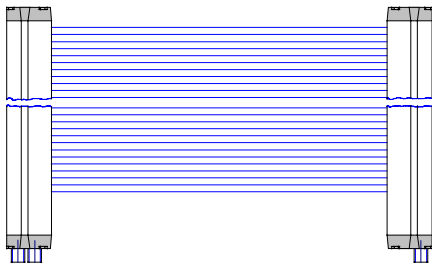
*It is recommended to calibrate once a day.*

## CONNECTING CHART

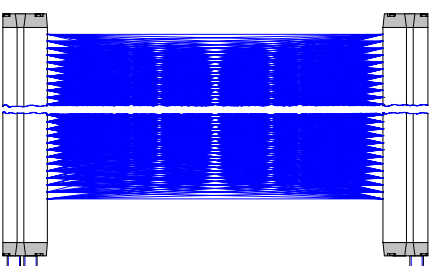


- 1 = WH PNP-ready out (100 mA), orange LED
- 2 = BN +UB (24-28 VDC)
- 3 = GN CAL-input (10 kΩ)
- 4 = YE PNP-output (100 mA), red LED
- 5 = GR Analog output (0-20 mA, or 4-24 mA, or 0-10 Volt)
- 6 = Pink program in (10 kΩ)
- 7 = Blue GND (0 V)
- 8 = shield

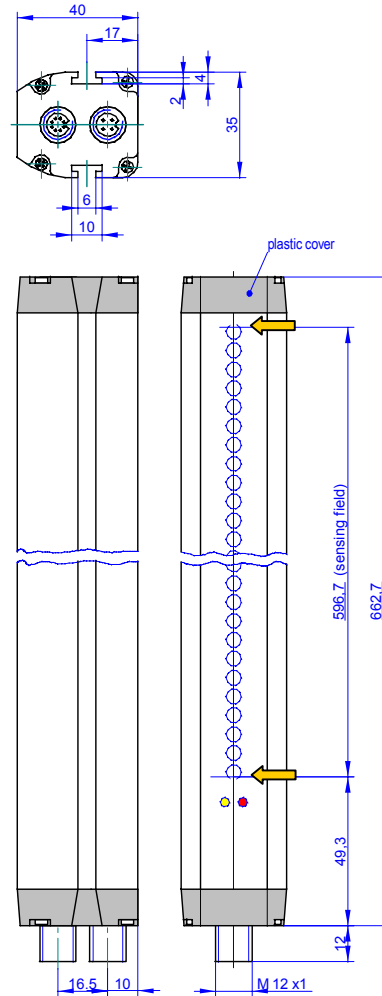
## PARALLEL BEAMS EVALUATION (96 BEAMS)



## CROSSED BEAMS EVALUATION (CA. 8000 BEAMS)



## Housing dimensions (mm)



## FACTORY DELIVERED PROGRAMMING

### 1. Beams evaluation [P] [H] or [K]

The beams can be factory-delivered in parallel mode (normal resolution [P], in parallel mode (high resolution [H] or crossed mode [K].

### 2. Sensitivity [level 1, 2, 3 or 4]

Look: „advisable setting of sensitivity“ on the other side of this sheet.

### 3. Variation [W] or Variation [F]

**Variation W:** a calibration is always performed automatically after the operating voltage is switched on.

It is also possible to calibrate during operation by activating the CAL-input (green wire).

**Variation F:** a calibration follows **only** after an order by the green CAL-input wire. These calibration data are stored and used again after power on.

### 4. Analog output for measurement [A0, A4, V0]

0 – 20 mA or 4 – 20 mA or 0 – 10 Volt. Standard: 0 – 20mA.

### 5. Mode of operation [D or L]

Dark mode or light mode. Standard: dark mode

## NOTES

The pink connection wire is only used for programming and has to be connected to GND (0 Volt).

The ANALOG-output (grey wire) is valid only by using the PARALLEL mode. By using the CROSSED mode, the ANALOG-output has no function.

**By mounting two or more light curtains there must be taken care, that the RECEIVER receives only the light beams of the belonging EMITTER.**

Because of the high precision and resolution of the light curtain, avoid reflected (mirrored) beams.

The light curtain has to be mounted and programmed by an authorised person.

To guarantee the proper function of the light curtain, all technical data has to be respected. The usage outside the listed technical data may destroy the equipment.

**WARNING!!!** This sensor is not to be used for personnel protection

