

dimensions 31.5 x 12 x 20mm

sensing range 30 ... 100mm

- ✓ plastic housing, compact design
- ✓ setting via teach-in
- ✓ background suppression
- ✓ M8-connector 4-pin



**low-cost diffuse reflection sensor with background suppression**



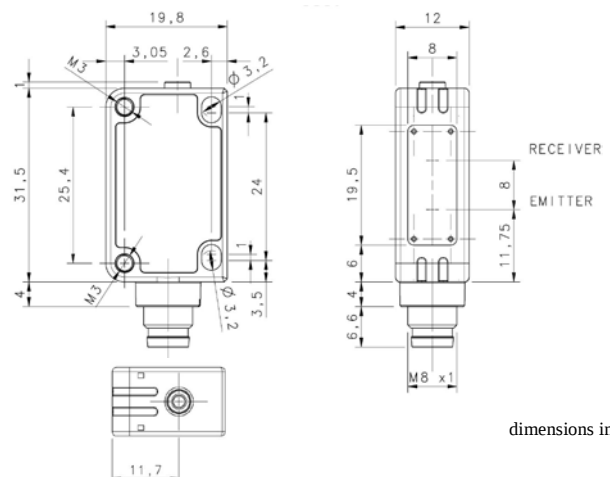
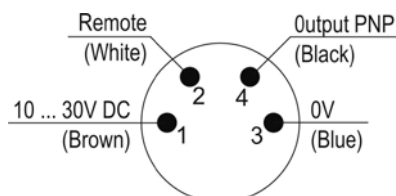
### Technical Data

### OT310371

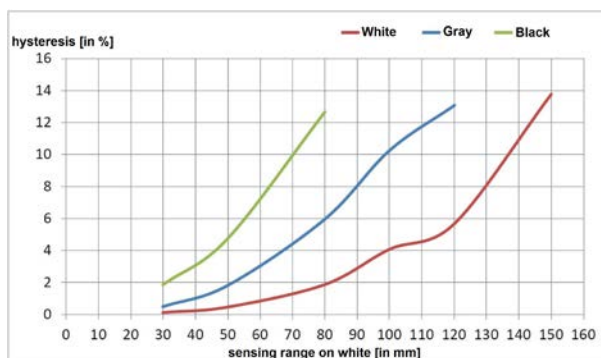
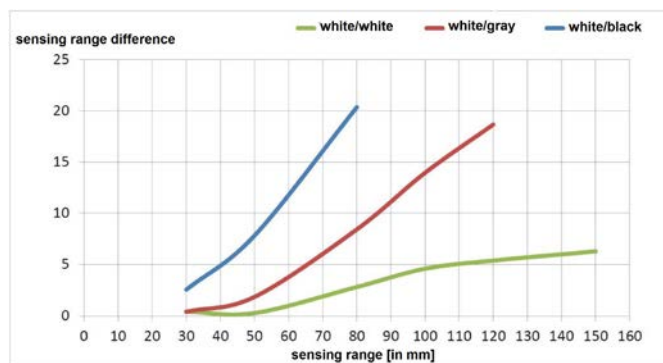
|                                       |                                                       |
|---------------------------------------|-------------------------------------------------------|
| function                              | diffuse reflection sensor with background suppression |
| adjustable sensing range              | 30 ... 100mm                                          |
| max. sensing range (white 90%)        | 0 ... 150mm                                           |
| max. sensing range (gray 18%)         | 4 ... 110mm                                           |
| max. sensing range (black 6%)         | 5 ... 80mm                                            |
| operating voltage                     | 10 ... 30V DC                                         |
| current consumption (w/o load)        | ≤ 20mA                                                |
| output current (max. load)            | ≤ 100mA                                               |
| output signal                         | NO / NC programmable                                  |
| voltage drop                          | ≤ 2V DC                                               |
| response / decay time                 | ≤ 1 ms                                                |
| switching frequency                   | 500Hz                                                 |
| transmitting element (pulsed)         | LED, red light                                        |
| wavelength                            | 632nm                                                 |
| short-circuit protection              | +                                                     |
| reverse polarity protection           | +                                                     |
| display (signal) / adjustment control | LED yellow                                            |
| material (housing)                    | lastic (ABS)                                          |
| material (front screen)               | PMMA                                                  |
| system of protection (EN60529)        | IP 67                                                 |
| temperature (operating)               | -20 ... +55°C                                         |
| temperature (storage)                 | -20 ... +70°C                                         |
| connection                            | M8-connector 4-pin                                    |

### Connection

### Dimensional drawing



dimensions in mm



### External teaching

According to the following procedure the sensor can be taught either via the Remote-input (white wire / Pin 2), as diffuse reflection sensor with background suppression or as diffuse reflection sensor with a defined sensing range on an object.

### Detection with defined sensing range

Align the sensor to the object to be detected and connect the white wire / Pin 2 for 1s with +24V DC. The sensor detects only objects at this defined distance. Objects at longer or shorter distance will not be detected.

### Background suppression

Align the sensor to the suppression area and connect the white wire / Pin 2 for 3s with +24V DC. Now the sensor detects all objects within this range and ignores reflections of the background.

### Setting of the switching output

The factory settings of the sensor's switching output is light-on mode (NO). Connecting the white wire (Pin 2) for 7s and +24V DC causes a dark-on mode (NC).

Article no: **OT310371**

Connection accessories: e.g. **VK200375**

### Accessories

| Article no. | Description                                       | Material            |
|-------------|---------------------------------------------------|---------------------|
| AO000473    | bracket for lateral mounting                      | steel chrome-plated |
| AO000474    | bracket L-shaped mounting                         | steel chrome-plated |
| AY000118    | fastening-parts for sensors design 09/16/26/31/33 | steel               |

**Warning:** Never use these devices in applications where the safety of a person depends on their functionality.