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

Remote (White)   Output PNP (Black)
2   4
10 ... 30V DC (Brown) 1   3   0V (Blue)

Dimensional drawing

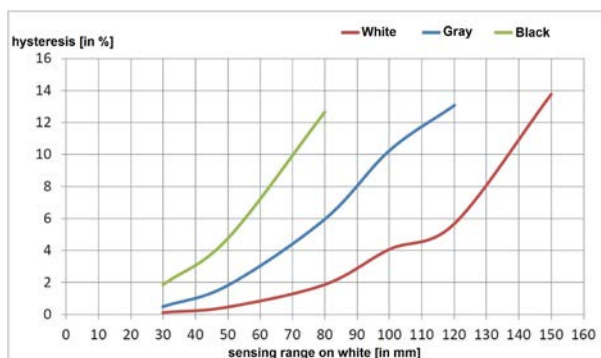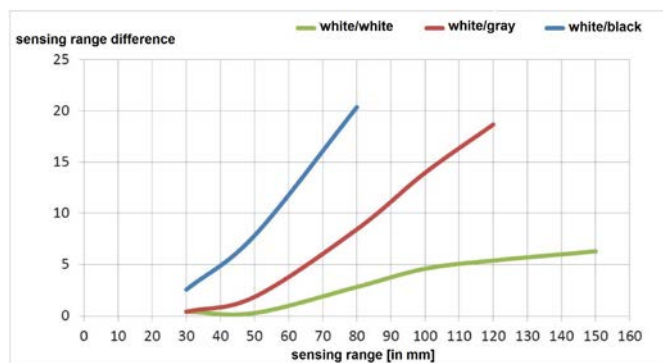dimensions in mm

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.