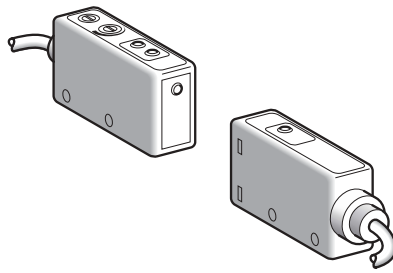


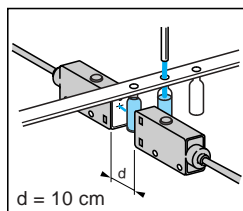
Miniature design



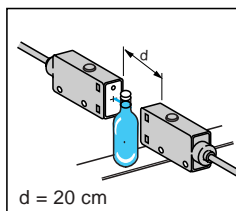
System	Thru-beam
Type of transmission	Infrared (transmission frequency = 1450 nm)
Nominal sensing distance (Sn)	50 m (use between 10 and 20 cm, see applications)
References	
3-wire, PNP and NPN Programmable N/O or N/C function	XUM W1KSNL2 (1)
Weight (kg)	0.155
Characteristics	
Product certifications	CE
Ambient air temperature	Operation: 0...+40 °C. Storage: - 5...+ 50 °C
Vibration resistance	25 gn, amplitude ± 2 mm (f = 10...55 Hz), conforming to IEC 60068-2-6
Shock resistance	30 gn, duration 11 ms, conforming to IEC 60068-2-27
Degree of protection	IP 65 conforming to IEC 529
Connection	Pre-cabled, diameter 4 mm, length 2 m, wire c.s.a. 2 x 0.2 mm ² (transmitter) or 4 x 0.2 mm ² (receiver)
Materials	Case: PBT, lenses: polycarbonate
Rated supply voltage	≐ 10.8...26.4 with protection against reverse polarity
Voltage limits	≐ 10...30 V (including ripple)
Solid-state output, on or off	Switching capacity (sealed) ≤ 100 mA with overload and short-circuit protection Voltage drop, closed state ≤ 2 V Maximum switching frequency 1 kHz Delays First-up: ≤ 50 ms; response: ≤ 0.5 ms; recovery: ≤ 0.5 ms
Current consumption, no-load	≤ 45 mA (transmitter + receiver)
Indicator lights	Transmitter Green LED = supply on Receiver Yellow LED: solid-state output (LED on = output on) Green LED: stability (see diagram on page 30173/3)

(1) Reference for both transmitter and receiver for thru-beam system sensors.

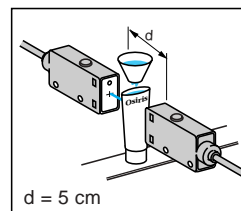
Application examples: detection of the level of aqueous liquids in any transparent or "almost" opaque container, and any product containing water molecules (adhesives, ice creams, damp fabrics, etc).



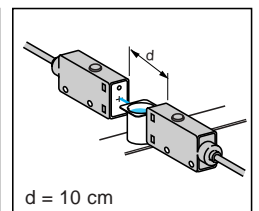
Transparent containers



d = 20 cm



d = 5 cm



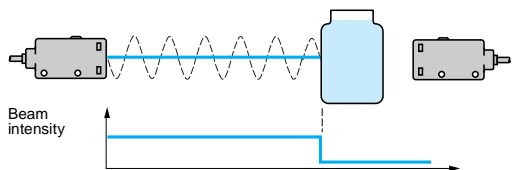
d = 10 cm

"Almost" opaque containers

Photo-electric sensors

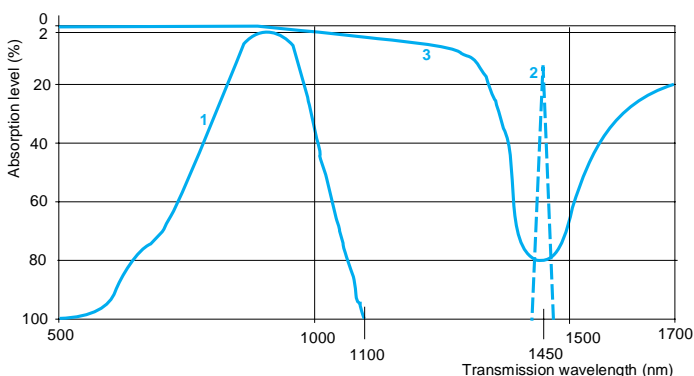
Osiris® Application, packaging series
Thru-beam system for detection of water and aqueous liquids

Sensing principle



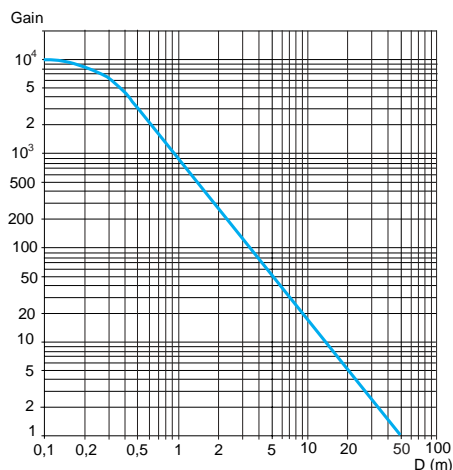
The wavelength of the transmitted beam corresponds to the maximum absorption frequency of water molecules.

Transmission curves

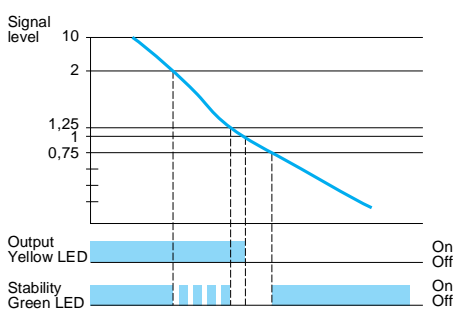


- 1 Transmission curve of a standard photo-electric sensor
- 2 Transmission curve of sensor **XUM W1KSNL2**
- 3 Curve of water absorption against incident beam wavelength

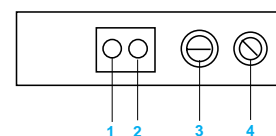
Excess gain curve



Stability curve

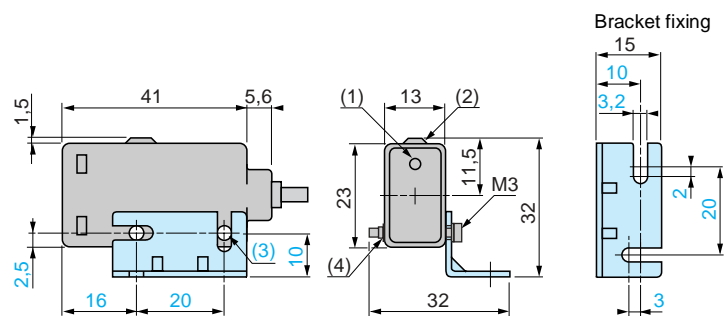


Functions



- LED**
- 1 Yellow output LED
 - 2 Green stability LED
- Potentiometer**
- 3 Sensitivity adjustment
- Switch**
- 4 NO/NC programming
 - NO: object detection
 - NC: object absence detection

Dimensions



- (1) Output LED.
- (2) Output DEL and stability LED.
- (3) 2 holes Ø 3.2.
- (4) Locknut plate.

Wiring schemes (3-wire ≡)

