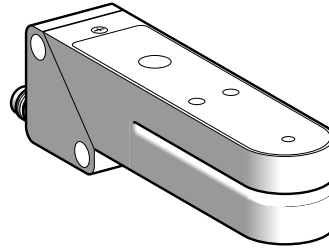# Photo-electric sensors

OsiSense XU Application, packaging series
For detection of labels (1)
DC supply. Solid-state output

Fork design

System	Thru-beam	
Type of transmission	Infrared	Red/green
Nominal sensing distance (Sn)	2 mm	

References

3-wire, PNP and NPN	NO or NC programmable function (2)	XUVK0252S	XUVK0252VS
Weight (kg)		0.120	

Characteristics

Product certifications		CE
Ambient air temperature		For operation: 0…+ 55 °C. For storage: - 20…+ 70 °C
Vibration resistance	Conforming to IEC 60068-2-6	Amplitude ±1.5 mm up to 55 Hz, 7 gn (f = 10…55 Hz)
Shock resistance	Conforming to IEC 60068-2-27	30 gn, duration 11 ms
Degree of protection	Conforming to IEC 60529	IP 65
Connection		M8 connector (suitable female connectors)
Materials		Case: zinc alloy; lenses: glass
Rated supply voltage		**--- 12…24 V with protection against reverse polarity**
Voltage limits		--- 10…30 V (including ripple)
Switching capacity (sealed)		**≤ 100 mA with overload and short-circuit protection**
Voltage drop, closed state		≤ 1.5 V
Output clamping resistor		10 kΩ
Current consumption, no-load		≤ 50 mA
Maximum switching frequency		25 kHz
Delays		First-up: ≤ 30 ms; response < 100 μs; recovery < 100 μs
Indicator lights	Output state	Yellow LED
	Sensor ready	Green LED
	Read error	Red LED

Function table	Function	Thru-beam system	
		No label present in the beam	Label present in the beam
Output state (PNP or NPN) indicator: yellow LED (illuminated when sensor output is ON)	NC	⌐̷─ ☀	─̷─ ⊗
	NO	─̷─ ⊗	⌐̷─ ☀

(1) Applications: the infrared transmission beam sensor **XUVK0252S** is suitable for the detection of all types of opaque labels; the red/green transmission sensor **XUVK0252VS** is suitable for the detection of all types of labels of different colours.
(2) This sensor is adjustable using teach mode: the NC or NO function is selected when performing the first stage of teaching for setting-up the sensor (see programming using teach mode, page 67).
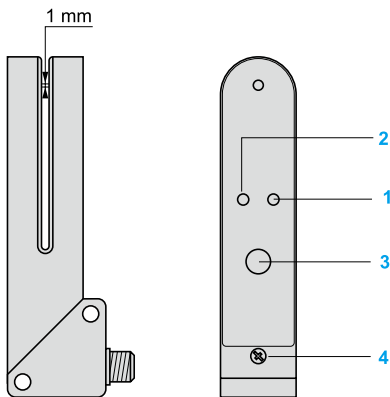
Photo-electric sensors
OsiSense XU Application, packaging series
For detection of labels
DC supply. Solid-state output

Presentation

1 mm

Programming using teach mode
■ Place the label to be detected in the beam of the optical fork. Press the SET button and hold down until the green LED 2 goes out,
■ When the green LED 2 flashes, the detector has "learnt" the label. Following this, place the backing to which the label is affixed in the beam of the optical fork. Press the SET button and hold down until the green LED 2 goes out,
■ When the green LED 2 illuminates as a steady light teaching is completed and the sensor is ready for operation.

1 Yellow LED, output state indicator
2 Dual colour green/red LED, Ready/Error
3 Teach mode programming SET button
4 Locking screw

Dimensions
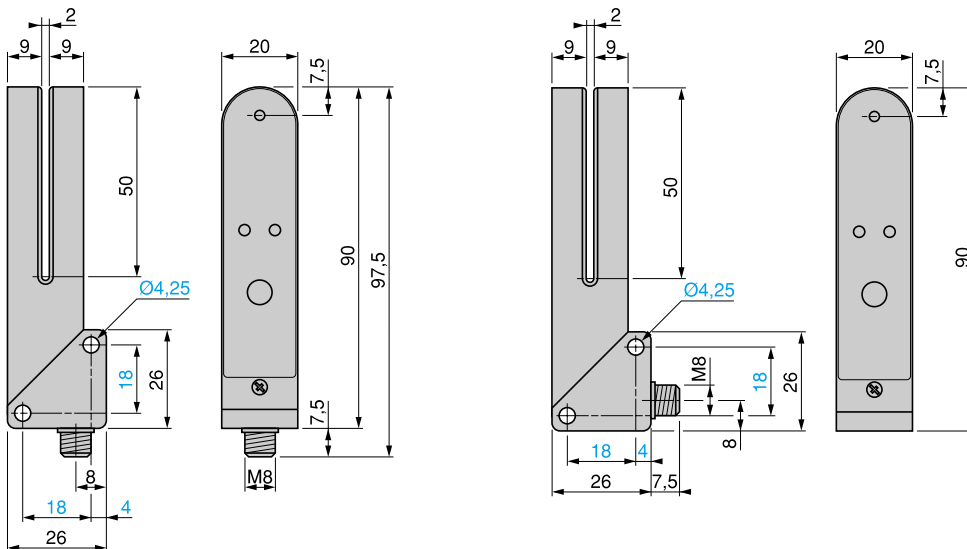
Connector scheme (sensor connector pin view)

NPN output   2   4   PNP output
1   3
+   −