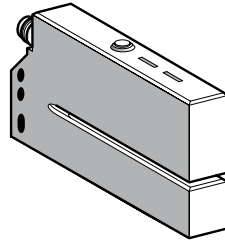# Photo-electric sensors
OsiSense XU Application, packaging series
Optical fork with teach mode
For detection of labels
DC supply. Solid-state output

Fork design

System		Thru-beam	
Type of transmission		Infrared, continuous	
Nominal sensing distance (Sn)	(Passageway)	3 mm	5 mm
References			
4-wire, PNP and NPN	NO or NC programmable function *(1)* Automatic adjustment using teach mode	**XUYFA983003COS**	**XUYFA983005COS**
Weight (kg)		0.07	0.07
Characteristics			
Product certifications		C€, cULus	
Ambient air temperature	For operation	- 20…+ 60 °C	
	For storage	- 30…+ 80 °C	
Degree of protection	Conforming to IEC 60529	IP 65	
Connection		M8, 4-pin connector (for pre-cabled version please consult our Customer Care Centre)	
Materials		Anodised aluminium	
Rated supply voltage		**--- 12…24 V with protection against reverse polarity**	
Voltage limits (including ripple)		**--- 10…30 V**	
Switching capacity (sealed)		**≤ 100 mA with overload and short-circuit protection**	
Immunity to ambient light	Natural light	3000 lux	
	Incandescent bulb	3000 lux	
Voltage drop, closed state		< 2 V	
Current consumption, no-load		40 mA	
Maximum switching frequency		**10 kHz**	
Delays		Response: 50 μs; recovery: 50 μs	
Indicator lights		Green LED: no object present Red LED: keypad locking and adjustments.	

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

(1) By reversing supply connections.

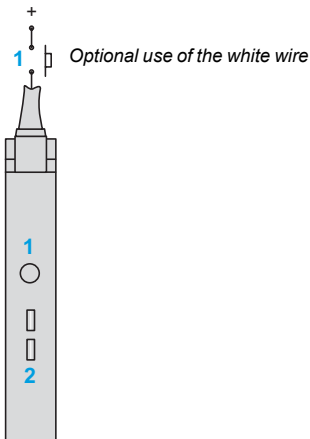Telemecanique
Sensors

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Presentation (adjustment and indicators)

Optional use of the white wire

Teaching is performed on the item to which the label is affixed

1 Teach mode button
- 1 press: standard teaching (red LED flashes for 2 s)
- 2 presses: fine teaching (green LED flashes for 2 s)
- 1 prolonged press: keypad locking (red LED on)

2 Red LED and green LED flash: short-circuit or object too opaque.
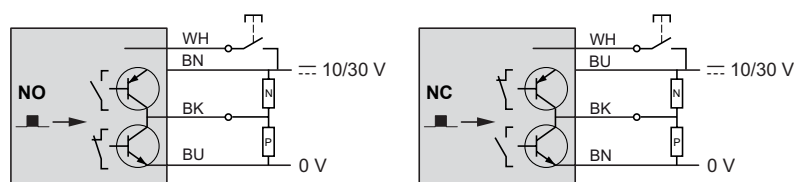
Dimensions

Optical axis
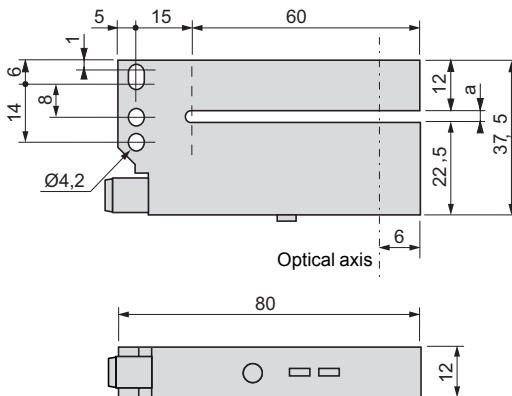
Reference	a (passageway)
XUYFA98●●●3COS	3
XUYFA98●●●5COS	5

Wiring schemes (sensor connector pin view)

Connector

Pin n° - colour
1 BN: Brown
2 WH: White (input)
3 BU: Blue
4 BK: Black (PNP and NPN outputs)

NO

WH
BN
BK
BU
10/30 V
0 V

NC

WH
BU
BK
BN
10/30 V
0 V

■ → *Object detected*
If the white wire is not used, connect to 0 V.

Application examples

Detection of overlapping envelopes
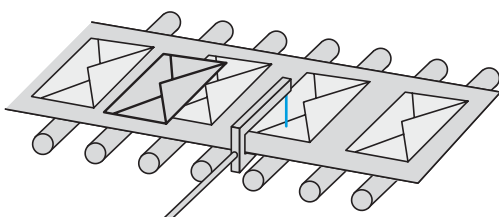
Detection of labels on belt