

# Photoelectric sensors

25.11.2019 / Version 2.0  
11209434

## O200

Fixed Settings or  
Adjustable via IO-Link



EN  
DE  
FR  
IT  
ES  
CN

www.baumer.com

qTarget®



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## Related Models

### Fixed Settings or Adjustable via IO-Link

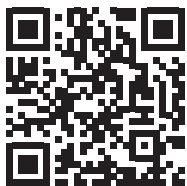
- O200.G\* (Background suppression sensors)
- O200.Z (Diffuse sensors with intensity difference)
- O200.R (Retro-reflective sensors)
- O200.S\* (SmartReflect light barriers)
- O200.T/E (Through beam sensors (E: Receiver)(T: Emitter))

\*Equipped with

ALINE®

The innovative, high performance CMOS Opto-ASIC for fast and temperature-stable sensors with high ambient light immunity

More information related to these products can be found on our website (CAD, Beamcharts, CoC, Drawings, IOdds ...)



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## Models with IO-Link



IO-Link Process Data Input									
IntegerT(16)	IntegerT(8)	8 bit							
Measurement Data Channel (MDC)	Scale	Baumer specific							
		7	6	5	4	3	2	1	0
				SSC4		Alarm	Quality		SSC1

- SSC1/4: Switching Signal Channels
- MDC: Excess Gain, Intensity or Switch Counter (selectable)
- Quality: The quality bit signals a weak signal
- Alarm: The alarm bit signals a problem with the configuration or the functionality of the sensor
- Scale: Factor by power of ten, applicable to the value of the Measurement Data Channel (MDC)

### Available Commands:

Teach-In commands, light emission on/off, Find Me (locating sensor) and more

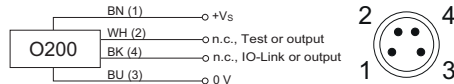
### Available Parameters:

Switching point, output function, time filters, operation modes, qTeach lock time, teach-mode, LED status indicators, Teach-In method and more

### Available Additional Data:

Switch counter, temperature

## Connection Diagrams



	Push-Pull	Push-Pull Dual Channel	PNP Complementary	NPN Complementary	O200.T, Emitter
1 - Brown BN	+Vs				
2 - White WH	n.c.	Push-Pull <sup>2</sup>	PNP Inverted	NPN Inverted	Test
3 - Blue BU	0 V				
4 - Black BK	Push-Pull/IO-Link <sup>1</sup>	Push-Pull/IO-Link <sup>1</sup>	PNP	NPN	n.c. or IO-Link <sup>1</sup>

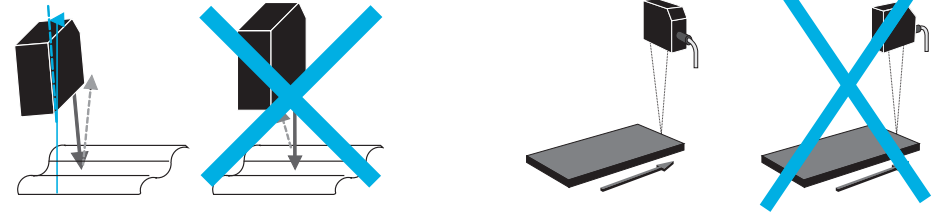
<sup>1</sup> Only models with IO-Link

<sup>2</sup> Can be adjusted via IO-Link to be PNP or NPN (open collector)  
Test: Connect Test to +Vs to deactivate the light emission (O200.T)  
n.c.: Not connected

See packaging label for the specific wiring of your product

- Disconnect power before connecting the sensor.  
- Voltage supply according UL 1310, Class 2  
or device shall be protected by an external R/C or listed fuse, rated max. 30 VAC/3A or 24 VDC/4A

## Mounting Instructions



### Background suppression sensors (O200.G) & SmartReflect Light barriers (O200.S)

The direct reflection from glossy or reflective objects must not impinge on the receiver. This can be avoided by slightly tilting the sensor.

It is recommended that the object to be detected approaches the active area of the sensor from the side, which avoids malfunctions caused by deflection of the light beam at edges.  
Exception: Sensors with line beam

### Sensoren mit Hintergrundaussblendung (O200.G) & SmartReflect Lichtschranken (O200.S)

Bei glänzenden oder spiegelnden Objekten darf der direkte Reflex nicht auf den Empfänger fallen. Dies kann vermieden werden, indem der Sensor leicht abgekippt wird.

Es ist zu beachten, dass ein zu erfassendes Objekt sich dem aktiven Bereich des Sensors von der Seite nähern sollte, dadurch werden Fehlschaltungen durch Ablenkungen des Lichtstrahles an Kanten vermieden.  
Ausnahme: Sensoren mit linienförmigen Strahl

### Détecteurs de suppression d'arrière-plan (O200.G) & barrières SmartReflect (O200.S)

La réflexion directe d'une surface brillante ou d'objets très réfléchissants ne doit pas parvenir au récepteur. Ceci peut être évité en inclinant un peu le capteur.

Il est recommandé que l'objet à détecter adopte une approche latérale, ce qui évite les dysfonctionnements liés à la diffraction du faisceau sur les bords.  
Exception: Capteurs à faisceau linéaire

### Fotocellule a soppressione di sfondo (O200.G) e SmartReflect (O200.S)

Su superfici lucide e riflettenti è consigliabile inclinare leggermente il sensore per evitare riflessi diretti sul ricevitore.

Si raccomanda di installare il sensore in modo che l'oggetto entri lateralmente nel fascio di luce.  
Eccezione: Sensori con raggio di linea

### Sensores con supresión de fondo (O200.G) y barreras SmartReflect (O200.S)

La reflexión directa sobre objetos brillantes o reflectantes no debe incidir en el receptor, Ésto se puede evitar inclinando ligeramente el sensor.

Se recomienda que el objeto se aproximelateralmente al sensor, de éste modo se Evitan errores de detección causados por la reflexión del haz en los bordes.  
Excepción: Sensores con rayo de línea

### 带背景抑制漫发射和智能反射传感器 (O200.G, O200.S)

光泽或高反光物体的全反射不得反射到接收器。通过稍微倾斜传感器可以避免这种情况。

建议被测物从侧面接近传感器的有效区域，这避免了光束在边缘处偏转而引起的故障。  
例外：线状光斑

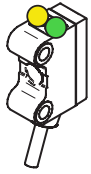


qTarget®

The Baumer design aligns the sensor's light beam to the fixing holes (qTarget®). This allows a fast and easy installation without fine-tuning as well as a fast exchange.

EN

LED Indication



Legend

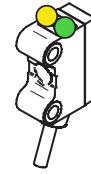
- LED on
- ① LED flashing 1 Hz
- ② LED flashing 2 Hz
- ⑧ LED flashing 8 Hz

Operating Mode

LED Indicators	Green	Yellow
Power on	●	
Short circuit	①	
Output 1 active		●
Output 1 signal close to threshold		⑧

DE

LED Anzeige



Legende

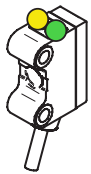
- LED leuchtet
- ① LED blinkt 1 Hz
- ② LED blinkt 2 Hz
- ⑧ LED blinkt 8 Hz

Betriebsmodus

LED Indikatoren	Grün	Gelb
Betriebsanzeige	●	
Kurzschluss	①	
Ausgang 1 aktiv		●
Ausgang 1 Signal nahe der Schwelle		⑧

FR

Indication LED



Légende

- LED ON
- ① LED clignotante 1 Hz
- ② LED clignotante 2 Hz
- ⑧ LED clignotante 8 Hz

Mode de fonctionnement

Indicateurs LED	Vert	Jaune
Power On	●	
Court-circuit	①	
Sortie 1 activée		●
Sortie 1 signal proche du seuil		⑧

IT

Indicazioni LED



Legenda

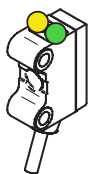
- LED acceso
- ① LED lampeggia a 1 Hz
- ② LED lampeggia a 2 Hz
- ⑧ LED lampeggia a 8 Hz

Modalità operativa

Indicazioni LED	Verde	Giallo
Power On	●	
Corto circuito	①	
Uscita 1 attiva		●
Uscita 1 prossima alla soglia		⑧

ES

Información LED



Leyenda

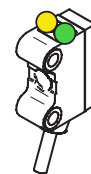
- LED ON
- ① LED parpadeo 1 Hz
- ② LED parpadeo 2 Hz
- ⑧ LED parpadeo 8 Hz

Modo operativo

Información LED	Verde	Amarillo
Power On	●	
Cortocircuito	①	
Salida 1 activa		●
Salida 1 señal dentro del intervalo		⑧

CN

LED 指示灯



图例

- LED 亮
- ① LED 闪烁 1 Hz
- ② LED 闪烁 2 Hz
- ⑧ LED 闪烁 8 Hz

操作模式

LED 指示灯	绿	黄
通电	●	
短路	①	
输出 1 激活		●
输出 1 信号接近阈值		⑧