

Ultrasonic sensors

UR12



IO-Link
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Related Models

- UR12.D (Analog output)
- UR12.P (1-Point switch output)
- UR12.P (2-Point switch output)
- UR12.D (Analog output retro fit version)

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(32)		IntegerT(8)		8 bit					
Measurement Data Channel (MDC)		Scale		Baumer specific					
				7	6	5	4	3	2
						SSC4		Alarm	Quality
								SSC2	SSC1

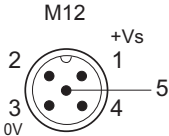
SSC1/2/4: Switching Signal Channels
MDC: Distance Value or Switch Counter (selectable)
Quality: The quality bit signals a weak echo signal
Alarm: The alarm bit signals a problem with the configuration or the functionality of the sensor
Scale: Factor by power of ten, applicable to the value of the Measurement Data Channel (MDC)

Available Commands:
Teach-in commands, sensor element on/off, Find Me (Locating sensor) and more

Available Parameters:
Switching point, switching hysteresis, output function, time filters, beam forming, measured value filtering, analog output characteristic, function of Pin 5, LED status indicators and more

Available Additional Data:
Switch counter, boot cycles, operation hours, device temperature, operating voltage, histograms

Connection Diagrams



	1-Point switch	2-Point switch	Analog measurement out	Analog measurement out
	.P	.P	.D	.D (retro)
1 - Brown BN	+Vs			
2 - White WH	n.c.	Push-Pull out 2	U or I	Teach-in
3 - Blue BU	0 V			
4 - Black BK	IO-Link / Push-Pull out 1			U or I
5 - Grey GY	Teach-in / Sync / Mux selectable via IO-Link			n.c.

- 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

Mindestabstand zwischen zwei Sensoren

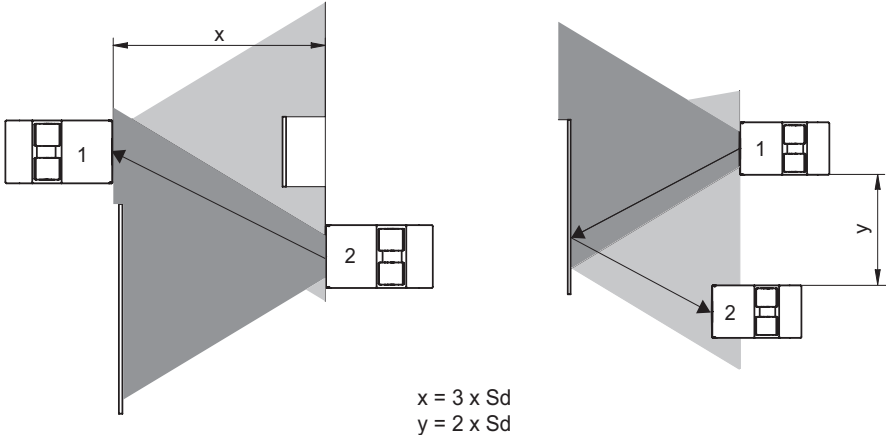
Minimal distance between two sensors

Distance minimale entre deux capteurs

Distanza minima tra due sensori

Distancia mínima entre dos sensores

传感器之间最小安装距离



LED Indication



Legend

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

Operating Mode

LED Indicators	Green	Yellow
Power on	LED on	
Short circuit	LED flashing 1 Hz	
Output 1 active		LED flashing 2 Hz
Output 1 signal close to threshold		LED flashing 8 Hz
Teach-in mode	see Teach-in Instruction	

LED Anzeige



Legende

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

Betriebsmodus

LED Indikatoren	Grün	Gelb
Betriebsanzeige	LED on	
Kurzschluss	LED blinkt 1 Hz	
Ausgang 1 aktiv		LED blinkt 2 Hz
Ausgang 1 Signal nahe der Schwelle		LED blinkt 8 Hz
Teach-in Modus	siehe Teach-in Anweisung	

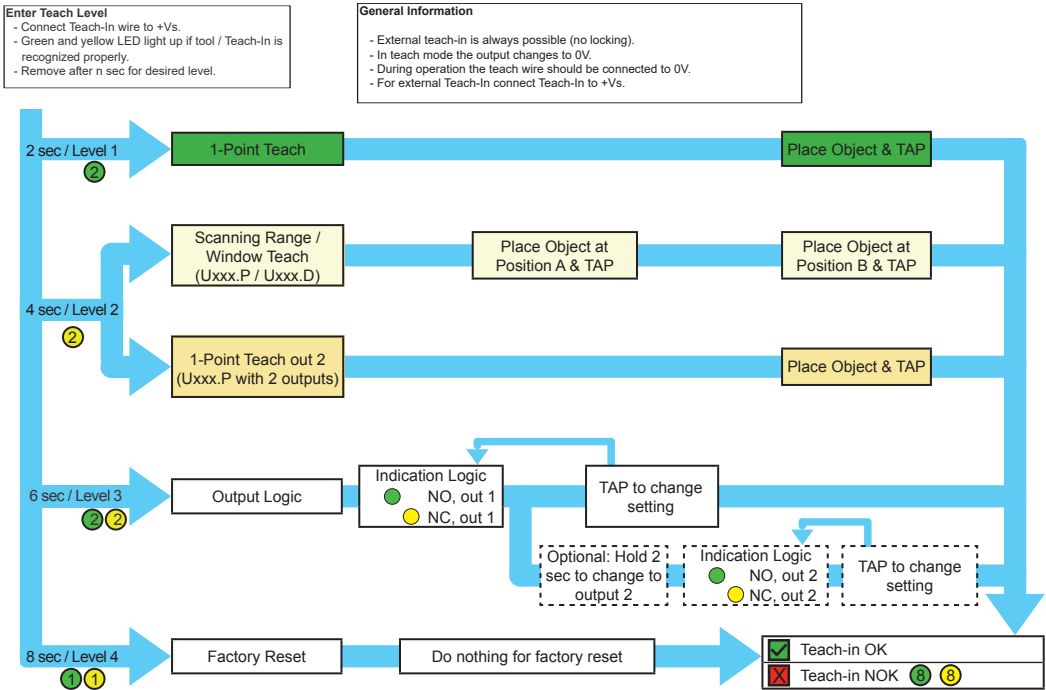
Teach-In Description Level 1 & 2

	UR12.P with 1 output	UR12.D	UR12.P with 2 outputs
Level 1	1-Point Teach Output 1 Set the switchpoint SP of output 1 at the position of the object	1-Point Teach Output 1 Set the switchpoint SP of output 1 at the position of the object	1-Point Teach Output 1 Set the switchpoint SP of output 1 at the position of the object
Level 2	Window Teach set a window in which an object should be detected	Scanning Range / Window Teach Set the scanning range related to the analogue value. Output 1 is active if an object is within the scanning range	1-point Teach Output 2 Set the switchpoint of output 2 at the position of the object

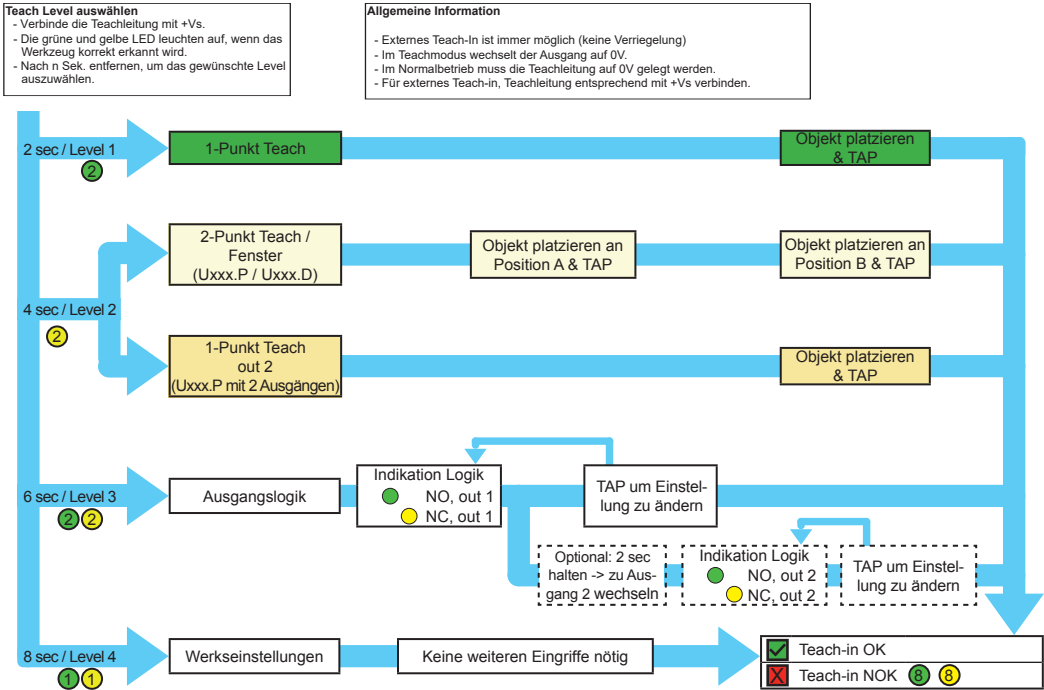
Teach-In Beschreibung Level 1 & 2

	UR12.P mit 1 Ausgang	UR12.D	UR12.P mit 2 Ausgängen
Level 1	1-Punkt Teach Ausgang 1 Setzt den Schaltpunkt SP des Ausgang 1 an der Position des Objektes	1-Punkt Teach Ausgang 1 Setzt den Schaltpunkt SP des Ausgang 1 an der Position des Objektes	1-Punkt Teach Ausgang 1 Setzt den Schaltpunkt SP des Ausgang 1 an der Position des Objektes
Level 2	Fenster Teach Definiert ein Schaltfenster, innerhalb welches ein Objekt erkannt werden soll	Messbereich / Fenster Teach Definiert den mit dem analogen Ausgang verknüpften Messbereich. Ausgang 1 ist aktiv, wenn sich ein Objekt innerhalb des Messbereichs befindet	1-Punkt Teach Ausgang 2 Setzt den Schaltpunkt SP des Ausgang 2 an der Position des Objektes

Teach-in Instruction



Teach-in Anleitung



Indication LED

Légende

● LED ON

① LED clignotante 1 Hz

② LED clignotante 2 Hz

③ LED clignotante 8 Hz

Mode de fonctionnement

FR

Indicateurs LED	Vert	Jaune
Power On	●	
Court-circuit	①	
Sortie 1 activée		●
Sortie 1 signal proche du seuil		⑧
Mode Teach-In	Voir Instructions Teach-In	

Indicazioni LED

Legenda

● LED on

① Lampeggiamento LED a 1 Hz

② Lampeggiamento LED a 2 Hz

⑧ Lampeggiamento LED a 8 Hz

Modalità operativa

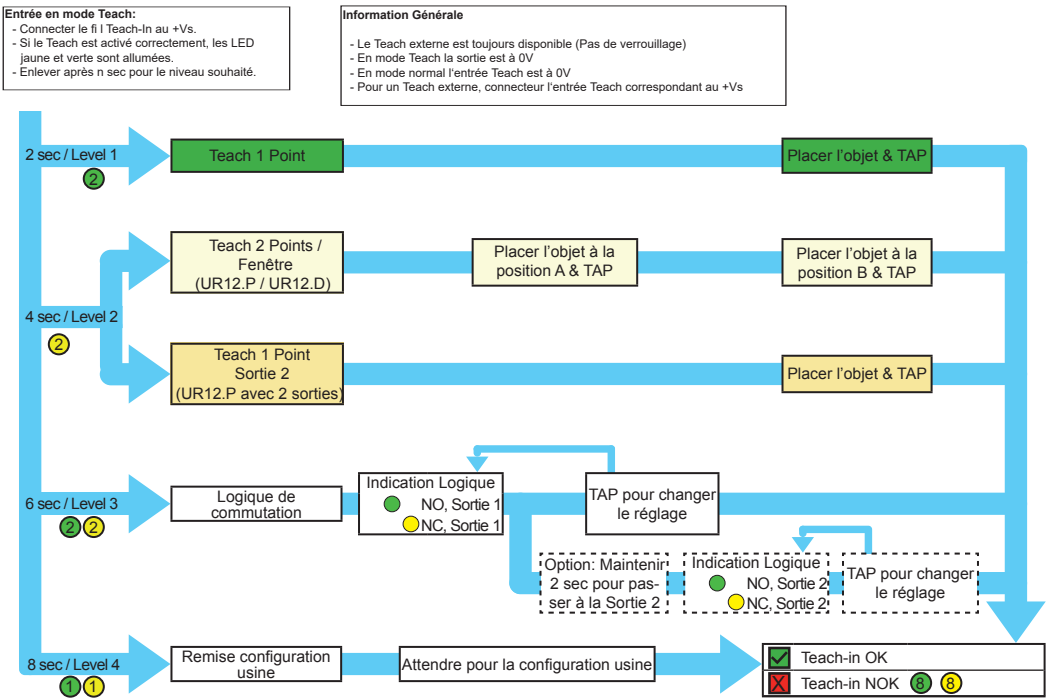
IT

Indicazioni LED	Verde	Giallo
Power On	●	
Corto circuito	①	
Uscita 1 attiva		●
Uscita 1 prossima alla soglia		⑧
Modalità di Teach-In	see Teach-In Instruction	

Description Teach-In Niveau 1 & 2

	UR12.P avec 1 Sortie	UR12.D	UR12.P avec 2 Sortie
Niveau 1	Sortie 1: Teach 1 Point Régler le point de commutation de la Sortie 1 à la position de l'objet 	Sortie 1: Teach 1 Point Régler le point de commutation de la Sortie 1 à la position de l'objet 	Sortie 1: Teach 1 Point Régler le point de commutation de la Sortie 1 à la position de l'objet
Niveau 2	Teach fenêtre Régler une fenêtre dans laquelle un objet doit être détecté 	Teach 2 Points / Fenêtre Régler la zone de mesure correspondante à la sortie analogique. La Sortie 1 est active si l'objet est dans la zone définie. 	Teach 1 Point Sortie 2 Régler le point de commutation de la Sortie 2 à la position de l'objet

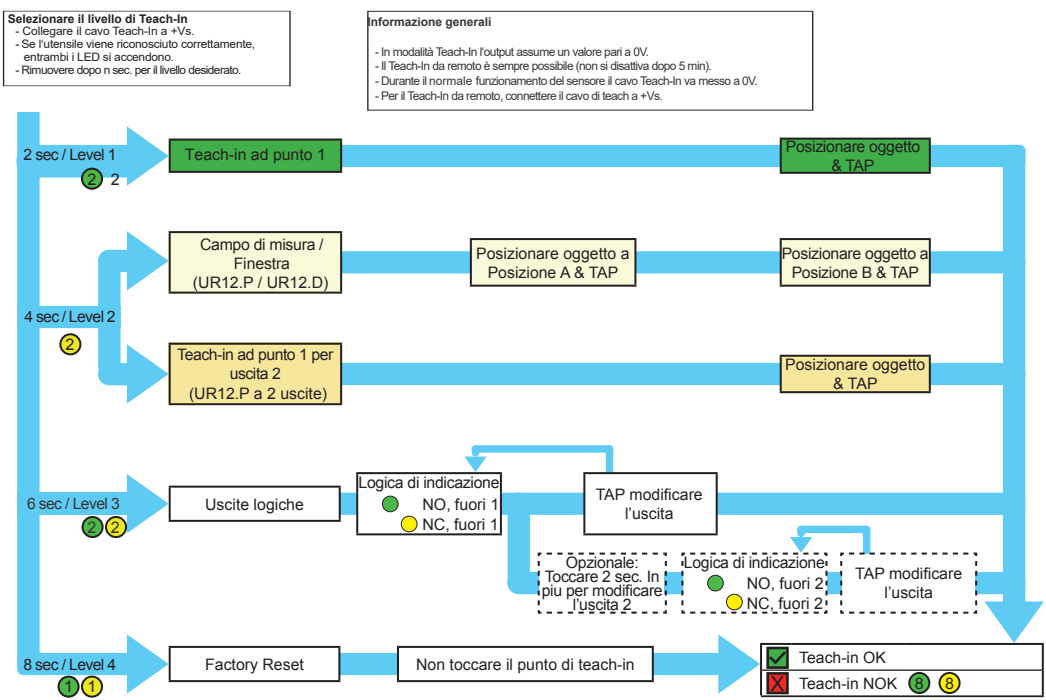
Instructions Teach-In



Descrizione livelli di Teach-in 1 e 2

	UR12.P con 1 uscita	UR12.D	UR12.P con 2 uscite
Livello 1	Uscita digitale – teach ad 1 punto Impostare il punto di commutazione dell'uscita 1 alla posizione desiderata 	Uscita digitale – teach ad 1 punto Impostare il punto di commutazione dell'uscita digitale alla posizione desiderata 	Impostazione uscita 1 Impostare il punto di commutazione dell'uscita 1 alla posizione desiderata
Livello 2	Soglia di commutazione a finestra Impostare una soglia di commutazione a finestra all'interno della quale rilevare l'oggetto 	Teach del range di misura a 2 punti Impostare il range di misura relativo all'uscita analogica. Se l'uscita digitale non viene impostata nel livello 1 rimane sempre attiva all'interno del range di misura. 	Impostazione uscita 2 Impostare il punto di commutazione dell'uscita 2 alla posizione desiderata

Istruzioni Teach-In



Información LED

Leyenda

● LED ON

① LED parpadeo 1 Hz

② LED parpadeo 2 Hz

③ LED parpadeo 8 Hz

Operating Mode

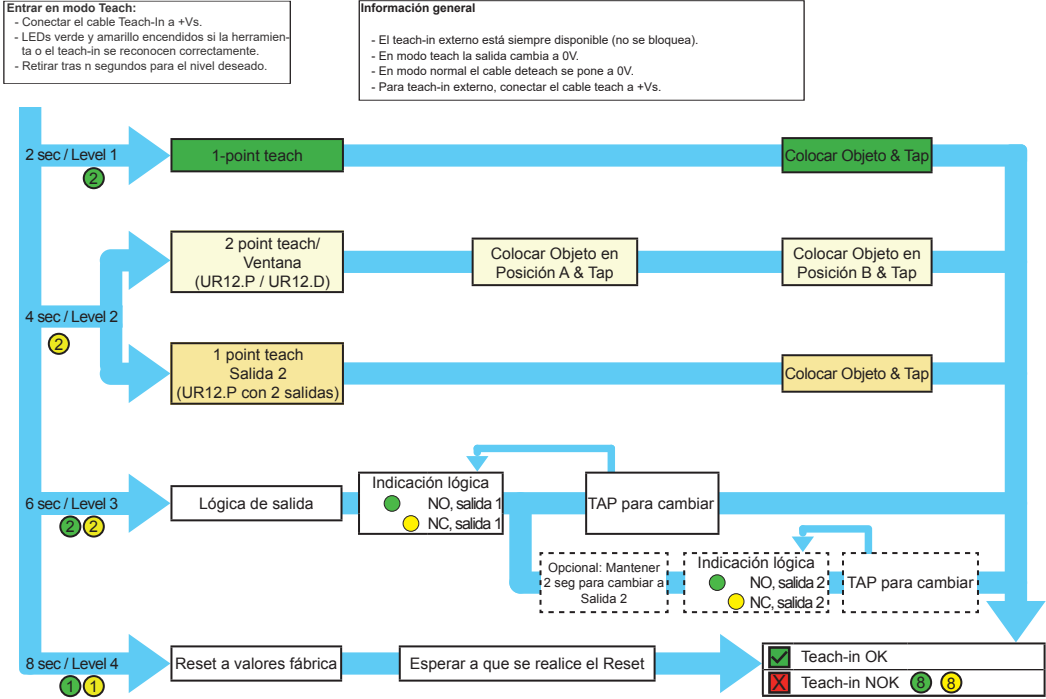
ES

LED Indicators	green	yellow
Power On	●	
Cortocircuito	①	
Salida 1 activa		●
Salida 1 señal dentro del intervalo		⑧
Modo Teach-In	Ver instrucciones Teach-In	

Descripción Teach-In Nivel 1 & 2

	UR12.P con 1 salida	UR12.D	UR12.P con 2 salida
Nivel 1	1 punto de enseñanza de salida 1 Definir el punto de conmutación de la salida 1 en la posición del objeto 	1 punto de enseñanza de salida 1 Definir el punto de conmutación de la salida 1 en la posición del objeto 	1 punto de enseñanza de salida 1 Definir el punto de conmutación de la salida 1 en la posición del objeto
Nivel 2	Aprendizaje de ventana Definir una ventana de detección del objeto 	2-Point Teach/Ventana Definir el intervalo de medición respecto a la salida analógica. La salida 1 se activa si detecta un objeto dentro del intervalo. 	1-Point Teach Salida 2 Definir el punto de conmutación de la salida 2 en la posición del objeto

Instrucciones Teach-In



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

CN

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
Teach-in 模式	详见 Teach-in 说明	

Teach-In 说明 1 级 & 2 级

	UR12.P 单输出	UR12.D	UR12.P 双输出
1级	1 点设定 输出 1 将输出 1 的开关点设置在被测物的位置 	1 点设定 输出 1 将输出 1 的开关点设置在被测物的位置 	1 点设定 输出 1 将输出 1 的开关点设置在被测物的位置
2级	窗口设定 设置一个被测物应被检测到的窗口 	2 点设定/窗口设定 设置与模拟值相对应的测量范围, 如果被测物处于测量范围内, 则输出 1 处于激活状态 	1 点设定 输出 2 将输出 2 的开关点设置在被测物的位置

设定说明

