

Ultrasonic sensors

01.2025/ Version 2.0
11722622

UR12

EN
DE
FR
IT
ES
CN



NexSonic®
qTarget®

www.baumer.com



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Models with IO-Link

IO-Link Process Data Input									
IntegerT(32)	8	8 bit							
Measurement Data Channel (MDC)	Scale	Baumer specific							
		7	6	5	4	3	2	1	0
		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

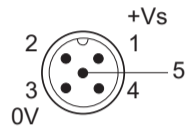
Related Models

- UR12 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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Connection Diagrams

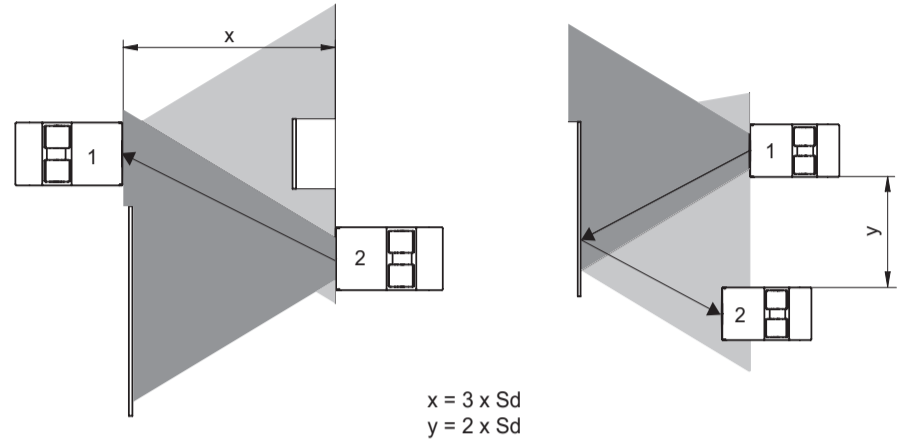


	1-Point switch	2-Point switch	Analog measurement out	Analog measurement out
	.P	.P	.D	.D (retro)
1 - Brown BN	+Vs			
2 - White WH	n.c.	Push-Pull out 2	U or I / Teach-In	Push-Pull
3 - Blue BU	0 V			
4 - Black BK	IO-Link / Push-Pull out 1			U or I
5 - Gray GY	Teach-in / Sync / Mux selectable via IO-Link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

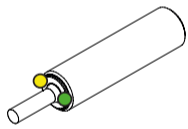
- Disconnect power before connecting the sensor.
- Voltage supply according UL 1310, Class 2
or device shall be protected by an external R/C or listed fuse, rated max. 30 VAC/3A or 24 VDC/4A

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



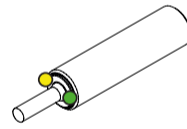
Legend

- 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 8 Hz
Output 1 signal close to threshold		LED flashing 2 Hz
Output 2 active		
Output 2 signal close to threshold		
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 flashing 1 Hz	
Ausgang 1 aktiv		LED flashing 8 Hz
Ausgang 1 Signal nahe der Schwelle		LED flashing 2 Hz
Ausgang 2 aktiv		
Ausgang 2 Signal nahe der Schwelle		
Teach-in Modus	siehe Teach-in Anweisung	

Teach-In Description Level 1 & 2

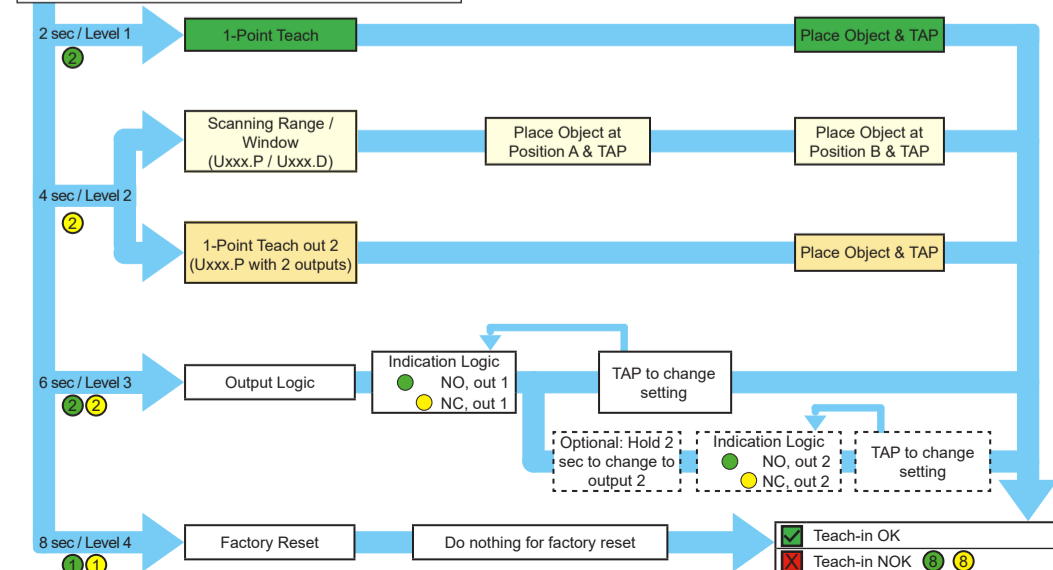
	Uxxx.P with 1 output	Uxxx.D; for Uxxx (retro) Level 1 = Level 2	Uxxx.P with 2 outputs
Level 1	1-Point Teach Output 1 Set the switchpoint SP of output 1 at the position of the object 	1-Point Teach Output 1 Set the switchpoint SP of output 1 at the position of the object 	1-Point Teach Output 1 Set the 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 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

	Uxxx.P mit 1 Ausgang	Uxxx.D; bei Uxxx (retro) Level 1 = Level 2	Uxxx.P mit 2 Ausgängen
Level 1	1-Punkt Teach Ausgang 1 Setzt den Schallpunkt SP des Ausgang 1 an der Position des Objektes 	1-Punkt Teach Ausgang 1 Setzt den Schallpunkt SP des Ausgang 1 an der Position des Objektes 	1-Punkt Teach Ausgang 1 Setzt den Schallpunkt SP des Ausgang 1 an der Position des Objektes
Level 2	Fenster Teach Definiert ein Schallfenster, innerhalb welches ein Objekt erkannt werden soll 	Messbereich / Fenster 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 Schallpunkt SP des Ausgang 2 an der Position des Objektes

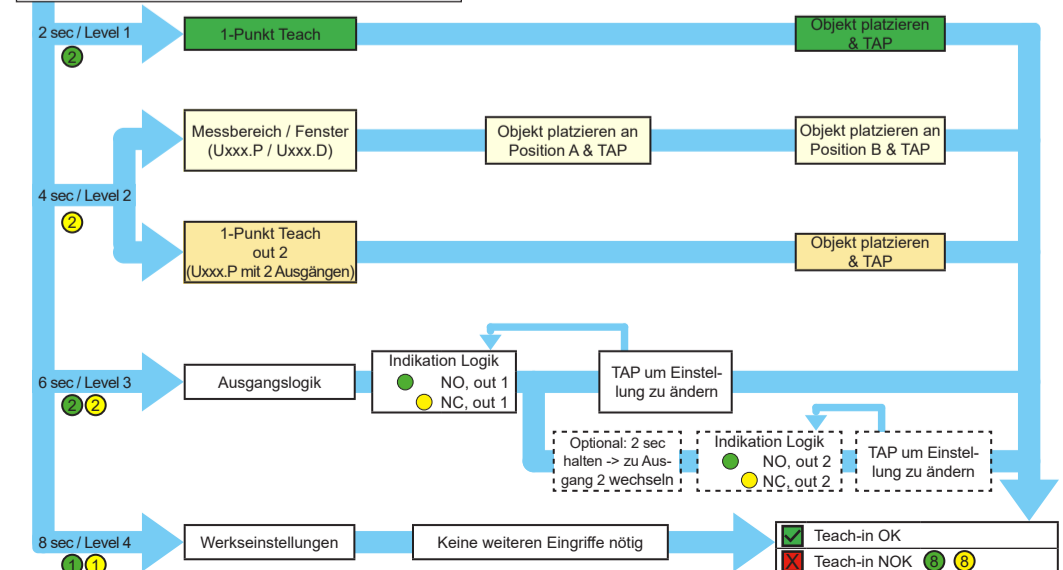
Teach-In Instruction

General Information
- External teach-in is always possible (no locking).
- In teach mode the output changes to 0 V.
- During operation the teach wire should be connected to 0V.
- For external teach-in, connect teach wire to +Vs.

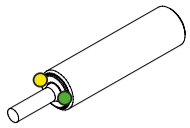


Teach-In Anleitung

Allgemeine Information
- Externes Teach-in ist immer möglich (keine Verriegelung)
- Im Teachmodus wechselt der Ausgang auf 0 V.
- Im Normalbetrieb muss die Teachleitung auf 0 V gelegt werden.
- Für externes Teach-in, Teachleitung entsprechend mit +Vs verbinden.



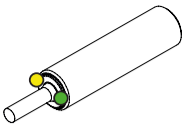
Indication LED **Légende** **Mode de fonctionnement** FR



- LED ON
- ① LED clignotante 1 Hz
- ② LED clignotante 2 Hz
- ③ LED clignotante 8 Hz

Indicateurs LED	Vert	Jaune
Power On	●	
Court-circuit	①	
Sortie 1 activée		●
Sortie 1 signal proche du seuil		⑧
Sortie 2 activée		
Sortie 2 signal proche du seuil		
Mode Teach-In	Voir Instructions Teach-In	

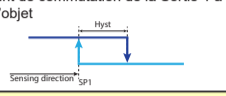
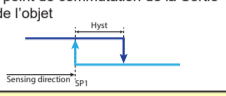
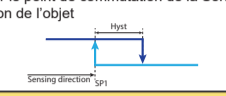
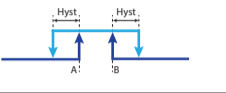
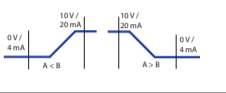
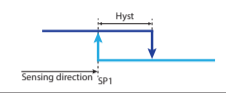
Indicazioni LED **Legenda** **Modalità operativa** IT



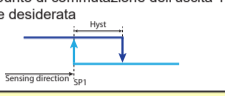
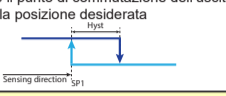
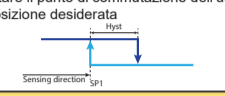
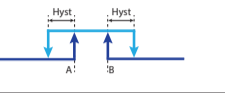
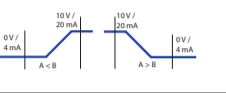
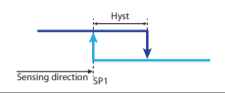
- LED on
- ① Lampeggiamento LED a 1 Hz
- ② Lampeggiamento LED a 2 Hz
- ⑧ Lampeggiamento LED a 8 Hz

Indicazioni LED	Verde	Giallo
Power On	●	
Corto circuito	①	
Uscita 1 attiva		●
Uscita 1 prossima alla soglia		⑧
Uscita 2 attiva		
Uscita 2 prossima alla soglia		
Modalità di Teach-In	see Teach-In Instruction	

Description Teach-In Niveau 1 & 2

	Uxxx.P avec 1 Sortie	Uxxx.D; pour Uxxx (rétro) Niveau 1 = Niveau 2	Uxxx.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 	Plage de mesure / 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 

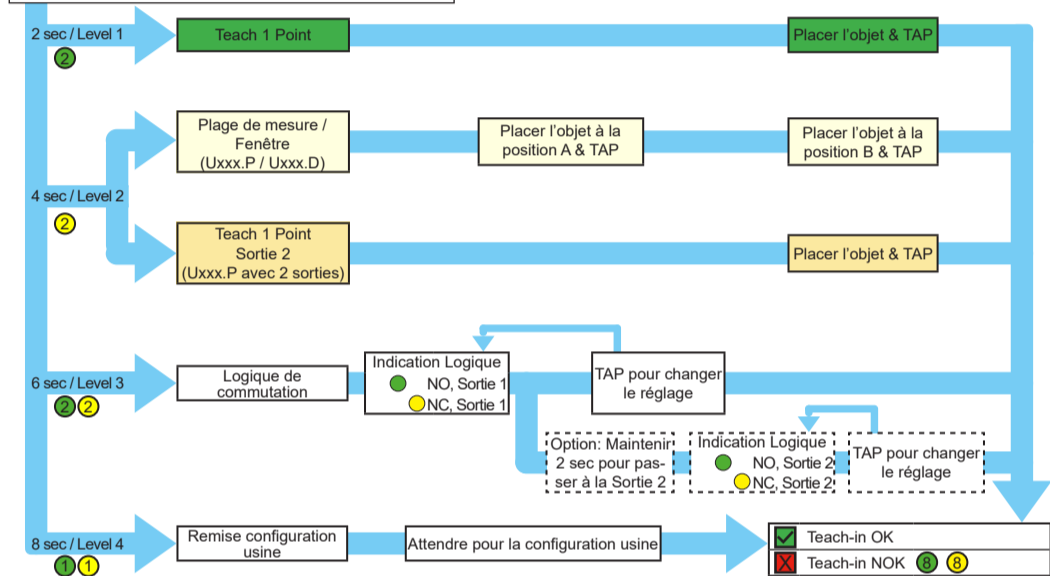
Descrizione livelli di Teach-in 1 e 2

	Uxxx.P con 1 uscita	Uxxx.D; per Uxxx (retro) Livello 1 = Livello 2	Uxxx.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 	Campo di misura / Finestra 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 

Instructions Teach-In

Information Générale

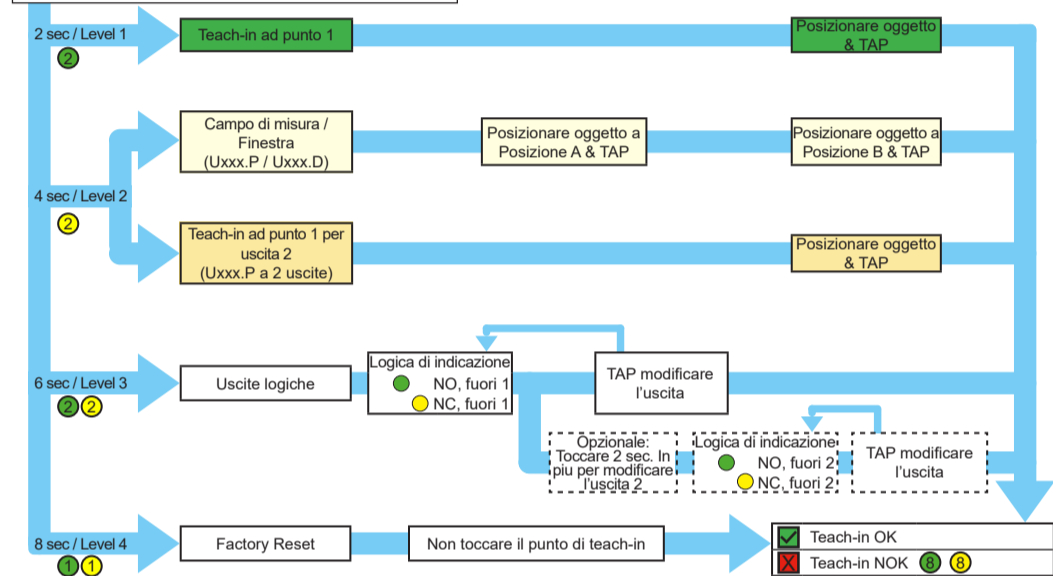
- Le Teach externe est toujours disponible (Pas de verrouillage)
- En mode Teach la sortie est à 0 V
- En mode normal l'entrée Teach est à 0 V
- Pour un Teach externe, connecter l'entrée Teach correspondant au +Vs



Instruccion Teach-In

Informazione generali

- Il teach-in da remoto è sempre possibile (non si disattiva dopo 5 min).
- Durante il teach l'output assume un valore pari a 0V.
- Durante il funzionamento standard del sensore il cavo del teach-in remoto è a 0V.
- Per il teach-in da remoto, connettere il cavo di teach a +Vs.



Información LED **Leyenda** **Operating Mode** ES



- LED ON
- ① LED parpadeo 1 Hz
- ② LED parpadeo 2 Hz
- ③ LED parpadeo 8 Hz

LED Indicators	green	yellow
Power On	●	
Cortocircuito	①	
Salida 1 activa		●
Salida 1 señal dentro del intervalo		⑧
Salida 2 activa		
Salida 2 señal dentro del intervalo		
Modo Teach-In	Ver instrucciones Teach-In	

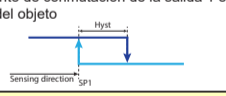
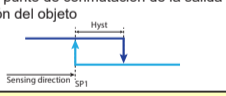
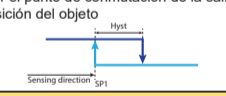
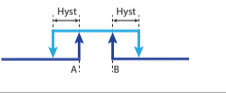
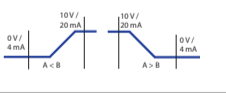
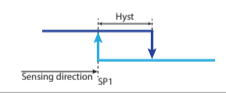
LED 指示灯 **图例** **操作模式** CN



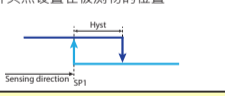
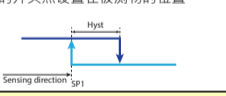
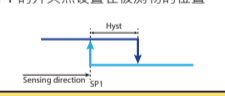
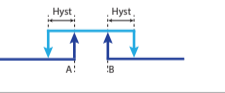
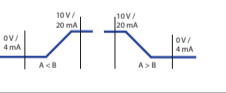
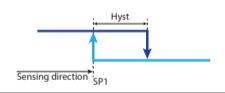
- LED 亮
- ① LED 闪烁 1 Hz
- ② LED 闪烁 2 Hz
- ⑧ LED 闪烁 8 Hz

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
输出 2 激活		
输出 2 信号接近阈值		
Teach-in 模式	详见 Teach-in 说明	

Descripción Teach-In Nivel 1 & 2

	Uxxx.P con 1 salida	Uxxx.D; para Uxxx (retro) Nivel 1 = Nivel 2	Uxxx.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 	Rango de medición / 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 

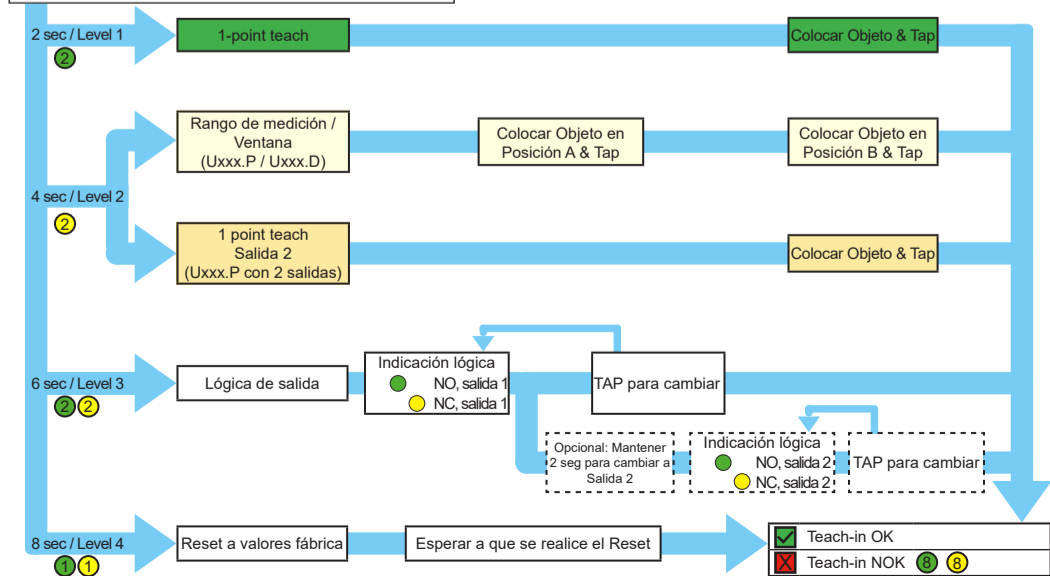
Teach-In 说明 1 级 & 2 级

	Uxxx.P 单输出	Uxxx.D; 用于 Uxxx (复古) 的 1 级=2 级	Uxxx.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 	测量范围/示教窗口 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 

Instrucciones Teach-In

Información general

- En modo teach la salida cambia a 0 V.
- En modo normal el cable deteach se pone a 0 V.
- Para teach-in externo, conectar el cable teach a +Vs
- El teach-in externo está siempre disponible (no se bloquea)



设定说明

总览:

- 在设定模式下输出变至 0 V.
- 在通常情况西设定先接至 0 V.
- 对于外部设定, 将设定线连接至 +Vs.
- 外部设定线永久有效 (无自锁)

