

# OMT300-R201-UEP-IO-0,3M-V31-L



- Medium design with versatile mounting options
- Space-saving distance sensors in small standardized design
- Multi Pixel Technology (MPT) exact and precise signal evaluation
- IO-Link interface for service and process data
- Analog output 0 ... 10 V DC

Distance sensor

# UK 🙈 😧 IO-Link

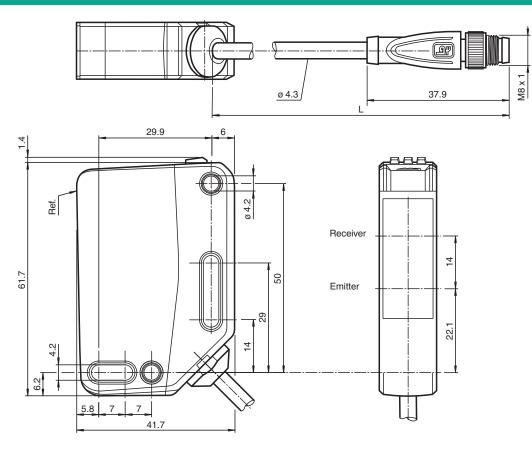
#### **Function**

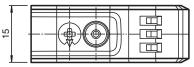
The optical sensors in the series are the first devices to offer an end-to-end solution in a medium-sized standard design - from the thru-beam sensor through to the measuring distance sensor. As a result of this design, the sensors are able to perform practically all standard automation tasks.

The entire series enables sensors to communicate via IO-Link. The DuraBeam laser sensors are durable and can be used in the same way as a standard sensor. Multi Pixel Technology (MPT) ensures that the standard sensors are flexible and can be adapted to the application environment.



### **Dimensions**





## **Technical Data**

#### General specifications

deneral specifications	
Measuring range	100 300 mm
Reference target	standard white, 100 mm x 100 mm
Light source	laser diode
Light type	modulated visible red light
Laser nominal ratings	
Note	LASER LIGHT , DO NOT STARE INTO BEAM
Laser class	1
Wave length	680 nm
Beam divergence	> 5 mrad, d63 < 2,8 mm in the range of 350 mm 800 mm
Pulse length	5.5 µs
Repetition rate	approx. 2.4 kHz
max. pulse energy	< 40 nJ
Angle deviation	max. +/- 1.5 °
Diameter of the light spot	approx. 3 mm at a distance of 300 mm
Opening angle	approx. 0.3 °
Ambient light limit	EN 60947-5-2 : 45000 Lux
Resolution	0.1 mm
Functional safety related parameters	
MTTF <sub>d</sub>	470 a
Mission Time (T <sub>M</sub> )	20 a

Refer to "General Notes Relating to Pepperl+Fuchs Product Information"

**Technical Data** 

# OMT300-R201-UEP-IO-0,3M-V31-L

Operating voltageUp1830 VDCRipplemax. 10 %No-load supply currentbProtection classIIIInterfaceIIIInterface typeO-lnik (via C/Q = pin 4)I.O-Link revisionI.1Device profileIIIDevice profileIIIDevice profileIIIIDevice profileIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII			
IndicatorImage: Image: Im	Diagnostic Coverage (DC)		0 %
Operation indicator         LEb green: constantity on - power on flashing with short break (1 142) - 10-Link mode           Function indicator         Image: Constantity on - witch output active constantity on - witch output incuive           Control elements         Image: Constantity on - witch output active constantity on - witch output incuive           Control elements         Image: Constantity on - witch output active constantity on - witch output incuive           Control elements         Image: Constantity on - witch output active constantity on - witch output active process data active active on proven on flashing witch active on output active comparitie master port type         Image: Constantity on - witch output active process data input 4 byto process data input 4 byto process data input 4 byto process data input 2 bits           Stol mode support         Image: Constantity on - witch output , 1 analog output , short-circuit proot, reverse polarity protection, strends proteine           Stol mode support         Image: Constantity on - witch output active constantity on - witch output active process data input 4 byto process data output 2 bits           Stol mode support         Image: Constantity on - witch output , 1 analog output , short-circuit proot, reverse polarity protection, strends protection           Stol mode support         Imax. 100 nA, rest			
Constantly on - power on if flashing (4P.) = hor circuit it lashing (			LED areen:
Control elementsImage: constantly on - switch output active constantly on it active constantly of - switch output active constantly of - switch output active constantly on eavieth for operating modes selectionControl elementsImage: constantly on eavieth for operating modes selectionElectrical specificationsmax. 10 %Devaling voltageImage: constantly on eavieth for operating modes selectionRobotImage: constantly on eavieth for operating modes selectionProtection classImage: constantly on eavieth for operating modes selectionInterface typeImage: constantly on eavieth for operating modes selectionInterface typeImage: constantly on eavieth for operating modes selectionInterface typeImage: constantly on eavieth for operating modesInterface typeImage: constantly on eavieth for operating modesInterface typeImage: constantly on eavieth for operating modesInterface typeImage: constantly operating operation operating modesInterface typeImage: constantly operating operation operationInterface typeImage: constantly operating operation operationInterface typeImage: constantly operating for operating modesInterface typeImage: constantly operating operationInterface typeImage: constantly operating operationInterface typeImage: constantly operating operationInt			constantly on - power on flashing (4Hz) - short circuit
Control elements         Gestep rotary switch for operating modes selection           Electrications         Use         18so VDC           Ripple         max. 10 %           No-load supply current         Use         18 må at 24 V supply voltage           Protection class         III           Interface         III           Interface type         OLIn (via C/G pin 4)           Device profile         III           Device profile         III           Device profile         IIII           Device ID         IIII           Interface         IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	Function indicator		constantly on - switch output active
Electrical specifications         Use 1830 VDC           Operating voltage         Use 1830 VDC           Ripple         max. 10 %           No-load supply current         Io           Voltage supply current         Io           Interface         III           Interface type         O-Link (via C/Q = pin 4 )           IO-Link revision         1.1           Device ID         Ox11191C (112640)           Transfer rate         COM2 (48.081/9)           Min. cycle time         3 ms           Process data width         Process data lately 12 bits           SlO mode support         yes           Compatible master port type         A           Obtype         Signal output           Signal output         Imax. 30 mA, resistive load           Signal output         Imax. 30 vDC           Switching voltage         max. 30 VDC           Switching voltage         Imax. 30 VDC           Switching voltage         Imax. 30 VDC           Switching voltage         Imax. 30 VDC <td>Control elements</td> <td></td> <td>Teach-In key</td>	Control elements		Teach-In key
Operating voltageUp1830 VDCRipplemax. 10 %No-load supply currentbProtection classIIIInterfaceIIIInterface typeO-lnik (via C/Q = pin 4)I.O-Link revisionI.1Device profileIIIDevice profileIIIDevice profileIIIIDevice profileIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	Control elements		5-step rotary switch for operating modes selection
Ripplemax. 10 %No-load supply current6<18 mA at 24 Vsupply voltage	Electrical specifications		
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Protection class         III           Interface            Interface type         O-Link (via C/Q = pin 4)           IO-Link revision         1.1           Device profile         Smart Sensor type 0(Np 9.3.3)           Device ID         0 x11191C (1120540)           Transfer rate         COM2 (88.4 kBi/s)           Min. cycle time         3 ns           Process data width         Process data uput 2 bits           SIO mode support         Qs           Compatible master port type         A           Output         C/G - Pin4: NPN normally open, PNP normally closed, IO-Link U-Pin2: analog output 0 n0 V           Signal output         The default setting is: C/G - Pin4: NPN normally closed, IO-Link U-Pin2: analog output 0 n0 V           Signal output         max. 30 VDC           Switching type         Max. 30 VDC           Switching current         Chora - Site output 0 10 V           Usage category         Uo-12 NG           Output type         1 voltage output 0 10 V           Load resistor         2 ns           Contomity         Process 2 10 Voltage output 1 10 V           Load resistor         2 ns           Contomity         EC 61131-9           Product standard         EN 60047-5-2     <	Ripple		max. 10 %
Anterface         Uniterface type         IO-Link (via C/Q = pin 4)           Interface type         Intervision         Intervision </td <td>No-load supply current</td> <td>I<sub>0</sub></td> <td>&lt; 18 mA at 24 V supply voltage</td>	No-load supply current	I <sub>0</sub>	< 18 mA at 24 V supply voltage
Interface type         IO-Link (via C/Q = pin 4 )           IO-Link revision         I           IO-Link revision         I           Device profile         Identification and diagnosis smart Sensor type 0/type 3.3           Device ID         I           Transfer rate         COM2 (38 4 kBits)           Min. cycle time         Image: Sensor type 0/type 3.3           Process data width         Image: Sensor type 0/type 3.3           Process data width         Image: Sensor type 0/type 3.3           SIO mode support         Image: Sensor type 0/type 3.3           Sion data width         Image: Sensor type 0/type 3.5           Signal output         Image: Sensor type 0/type 3.5           Signal output (sensor type 0/type 3.5         Imax. 100 mA , resistive load	Protection class		III
IO-Link revisionI1.1Device profileIdentification and diagnosis ast Sensor type 0.3 San Sensor type 0.9 Device IDIdentification and diagnosis sand Sensor type 0.9 Own 20.8 4 kBit/s)Device IDId0.11191C (1120540)Transfer rateCOM2 (8.4 kBit/s)Min. cycle timeIdentification and diagnosis ast output 2 bitsProcess data widthProcess data output 2 bitsSIO mode supportyesCompatible master port typeAOutputThe default setting is: CiCl - Piri4: NPN normally open, PNP normally closed, IO-Link U - Piri2: analog output 0 10 VSignal outputmax. 30 V DCSwitching voltagemax. 30 V DCSwitching currentIde fault setting is: currege-proofVoltage dropVuI. Som ode supportCo-12 and DC-13Voltage dropVuVoltage output1.0 VNLader existor2 msAnalog output 1, short-circuit-proof, reverse polarity protection, surge-proofVoltage output1.0 VAVoltage output 1, short-circuit-proof, reverse polarity protection, surge-proofSwitching currentIde fault setting is: current is surge-proofVoltage dropVuVoltage output 1, short-circuit-proof, reverse polarity protectionUpput type2 holdage output 2, short-circuit-proof, reverse polarity protectionRecovery time2 msDuput type1.0 Vintage output 3, short-circuit-proof, reverse polarity protectionConternity1.0 Vintage output 3, short-circuit-proof,	Interface		
Device profile         Identification and diagnosis Smart Sensor type 0/type 3.3           Device ID         0           Transfer rate         COM2 (38.4 kBit/s)           Min. cycle time         3 ms           Process data width         Process data input 4 byte Process data uiput 2 bits           SIO mode support         yes           Compatible master port type         A           Dutput         The default setting is: C/O - Pin/t. NPN normally open, PNP normally closed, IO-Link Or - Pin/t. NPN normally open, PNP normally closed, IO-Link           Signal output         The default setting is: C/O - Pin/t. NPN normally open, PNP normally closed, IO-Link Or - Pin/t. NPN normally optic 0.1. IO V           Signal output         max. 30 V DC           Switching ourpet         max. 100 mA, resistive load           Usage category         DC-12 and DC-13           Voltage drop         U           Voltage output         1 voltage output 0 10 V           Recovery time         2 ms           Analog output 0 10 V         2 ms           Contomity         2 ms           Contomity         2 ms           Contomity         2 ms           Recovery time         No loage output 1 470 G current output           Recovery time         No loage output 1 470 G current output	Interface type		IO-Link ( via C/Q = pin 4 )
Device ID         Smart Sensor type 0.7ype 3.3           Device ID         Ox11191C (1120540)           Transfer rate         CM2 (38 k Bit/s)           Min. cycle time         3 ms           Process data width         Si So A k Bit/s)           Process data width         yes           Compatible master port type         A           Output         Versess data input 4 byte process data output 2 bits           Signal output         A           Dutput         A           Signal output         Signal output, 1 analog output 0 10 V           Signal output         Imax. 30 V DC           Switching voltage         max. 30 V DC           Switching current         Imax. 100 mA, resistive load           Usage category         Dc-12 and Dc-13           Voltage drop         U_d         \$1.5 V DC           Response time         2 ms           Output type         1 voltage output 0 10 V           Laad resisfor         1 voltage output 0 10 V           Communication interface         1 voltage output 1 10 N           Laad resisfor         1 voltage output 0 10 V           Laad resisfor         1 voltage output 0 10 V           Laad resisfor         ICe C1131-9           Product st	IO-Link revision		1.1
Transfer rateCOM2 (38.4 kBit/s)Min. cycle time3 msProcess data widthProcess data input 4 byte Process data output 2 bitsSIO mode supportyesCompatible master port typeAOutputSwitching typeThe default setting is: $C'O = Pin4: NPN normally open, PNP normally closed, IO-LinkU—Pin2: analog output 0 10 VSignal output1 push-pull output , 1 analog output 0 10 VSignal outputmax. 30 V DCSwitching voltagemax. 30 V DCSwitching currentmax. 100 mA, resistive loadUsage categoryDC-12 and DC-13Voltage dropUds < 1.5 V DC$	Device profile		
Min. cycle timeImage: space	Device ID		0x11191C (1120540)
Process data width         Process data output 2 bits           SIO mode support         > A           Compatible master port type         > A           Output         > A           Switching type         The default setting is: C(? - Pin'. INPN ormally open, PNP normally closed, IO-Link U—Pin2: analog output 0 … 10 V           Signal output         1 push-pull output , thort-circuit-proof, reverse polarity protection, surge-proof           Switching voltage         max. 30 V DC           Switching current         Imax. 100 mA, resistive load           Usage category         DC-12 and DC-13           Voltage drop         U_d           Aralog output Que         I voltage output 0 … 10 V           Response time         2 ms           Output type         I voltage output 0 … 10 V           Load resistor         I voltage output 0 … 10 V           Load resistor         2 ms           Recovery time         > 1 KΩ voltage output 1 … 10 V           Load resistor         IEC 61131-9           Product standard         IEC 61131-9           Product standard         IEC 61131-9           Product standard         IEC 61131-9           Product standard         IEC 60097-5-2           Laser safety         EN 60925-1:2014           Waruu up time </td <td>Transfer rate</td> <td></td> <td>COM2 (38.4 kBit/s)</td>	Transfer rate		COM2 (38.4 kBit/s)
Process data output 2 bitsSIC onde supportyesCompatible master port typeAOutputThe default setting is: C/Q - Pin4: NPN normally open, PNP normally closed, IO-Link U—Pin2: analog output 0 10 VSignal output1 push-pull output, 1 analog output, short-circuit-proof, reverse polarity protection, surge-proofSwitching voltagemax. 30 V DCSwitching currentImage and DC-13Usage categoryDC-12 and DC-13Voltage dropU_dSignal output< 1.5 V DC	Min. cycle time		3 ms
Compatible master port type         A           Output         Fine default setting is: C(- Pin4: NPN normally open, PNP normally closed, IO-Link U—Pin2: analog output 0 10 V           Signal output         signal output, 1 analog output 0 10 V           Signal output         max. 30 V DC           Switching voltage         max. 100 mA , resistive load           Usage category         DC-12 and DC-13           Voltage drop         Ud           Voltage output         1.5 V DC           Response time         2 ms           Analog output         1 voltage output; 0 10 V           Output type         1 voltage output; 2 470 Ω current output           Response time         2 ms           Conformity         EC 61131-9           Product standard         EN 60947-5-2           Laser safety         EN 60947-5-2           Masserment accuracy         0.05 %/K           Warm up time         6.05 %/K           Mareu time         5 min           Respeat accuracy         6.05 %	Process data width		
Output         The default setting is: C/2 - Pin4: NPN normally open, PNP normally closed, IO-Link U — Pin2: analog output 0 10 V           Signal output         1 push-pull output 1 10 v           Switching voltage         max. 30 V DC           Switching current         1           Usage category         DC-12 and DC-13           Voltage drop         U <sub>d</sub> Asset category         DC-12 and DC-13           Voltage drop         U <sub>d</sub> Response time         2 ms           Analog output         1 voltage output 0 10 V           Load resistor         2 ms           Output type         1 voltage output; 2 470 Ω current output           Load resistor         2 ms           Contromity         2 ms           Product standard         1 EC 61131-9           Product standard         1 EN 60927-52           Laser safety         EN 60927-52           Measurement accuracy         0.05 %/K           Warm up time         0.05 %/K           Marmu ptime         5 min           Repeat accuracy         <0.5 %	SIO mode support		yes
Switching type         The default setting is: C/C - Pin4: NPN normally open, PNP normally closed, IO-Link U—Pin2: analog output 0 10 V           Signal output         1 push-pull output , 1 analog output 0, short-circuit-proof, reverse polarity protection, surge-proof           Switching ourgen         max. 30 V DC           Switching current         max. 30 V DC           Usage category         DC-12 and DC-13           Voltage drop         Ua           Response time         max. 100 mA , resistive load           Output type         0.5 V DC           Readog output         Ua           Output type         1 voltage output : 0 10 V           Load resistor         2 ms           Recovery time         2 ms           Contromity         EC 61131-9           Product standard         EC 61131-9           Product standard         EN 60947-5-2           Laser safety         No6825-1:2014           Weasurement accuracy         0.05 %/K           Warm up time         6.05 %           Repeat accuracy         6.05 %	Compatible master port type		A
C/O - Pin4: NPN Formally open, PNP normally closed, IO-Link         Signal output       1 push-pull output 0 10 V         Switching voltage       max. 30 V DC         Switching current       [e]       max. 100 mA, resistive load         Usage category       DC-12 and DC-13         Voltage drop       Ud       <1.5 V DC	Output		
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Switching currentmax. 100 mA, resistive loadUsage categoryDC-12 and DC-13Voltage dropU_dSappose time2 msAnalog output1 voltage output: 0 10 VOutput type1 voltage output: 0 10 VLoad resistor2 msRecovery time> 1 kΩ voltage output; ≤ 470 Ω current outputRecovery timeEC 61131-9Product standardEN 60947-5-2Laser safetyEN 60947-5-2Laser safetyEN 60947-5-2Messurement accuracy0.05 %/KYarm up time5 minRepeat accuracy< 0.5 %	Signal output		1 push-pull output , 1 analog output , short-circuit-proof, reverse polarity protection, surge-proof
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Voltage dropUd≤ 1.5 V DCResponse time2 msAnalog output1 voltage output: 0 10 VOutput type1 voltage output: 0 10 VLoad resistor2 msRecovery time2 msConformity2 msCommunication interfaceIEC 61131-9Product standardEN 60947-5-2Laser safetyEN 60825-1:2014Measurement accuracy0.05 %/KVarm up time5 minRepeat accuracy< 0.5 %	Switching current		max. 100 mA , resistive load
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Analog outputOutput type1 voltage output: 0 10 VLoad resistor> 1 kΩ voltage output; ≤ 470 Ω current outputRecovery time2 msConformityEC 61131-9Product standardEN 60947-5-2Laser safetyEN 60825-1:2014Measurement accuracy0.05 %/KVarm up time5 minRepeat accuracy< 0.5 %	Voltage drop	$U_d$	≤ 1.5 V DC
Output type1 voltage output: 0 10 VLoad resistor> 1 kΩ voltage output; ≤ 470 Ω current outputRecovery time2 msConformityIEC 61131-9Product standardIEN 60947-5-2Laser safetyEN 60825-1:2014Measurement accuracy0.05 %/KYarm up time5 minRepeat accuracy< 0.5 %	Response time		2 ms
Load resistor> 1 kΩ voltage output ; ≤ 470 Ω current outputRecovery time2 msConformityIEC 61131-9Communication interfaceIEC 61131-9Product standardEN 60947-5-2Laser safetyEN 60825-1:2014Measurement accuracy0.05 %/KVarm up time0.05 %/KRepeat accuracy< 0.5 %Linearity error0.5 %	Analog output		
Recovery time2 msConformityCommunication interfaceIEC 61131-9Product standardEN 60947-5-2Laser safetyEN 60825-1:2014Measurement accuracy0.05 %/KYarm up time0.05 %/KRepeat accuracy< 0.5 %	Output type		1 voltage output: 0 10 V
ConformityCommunication interfaceIEC 61131-9Product standardIEC 610947-5-2Laser safetyEN 60825-1:2014Measurement accuracy0.05 %/KVarm up time0.05 %/KRepeat accuracy< 0.5 %	Load resistor		> 1 k $\Omega$ voltage output ; $\leq$ 470 $\Omega$ current output
Communication interfaceIEC 61131-9Product standardEN 60947-5-2Laser safetyEN 60825-1:2014Measurement accuracyTemperature drift0.05 %/KWarm up time5 minRepeat accuracy< 0.5 %	Recovery time		2 ms
Product standardEN 60947-5-2Laser safetyEN 60825-1:2014Measurement accuracy0.05 %/KYarm up time0.05 %/KRepeat accuracy< 0.5 %	Conformity		
Laser safety     EN 60825-1:2014       Measurement accuracy     0.05 %/K       Temperature drift     0.05 %/K       Warm up time     5 min       Repeat accuracy     <0.5 %	Communication interface		IEC 61131-9
Measurement accuracy       0.05 %/K         Temperature drift       0.05 %/K         Warm up time       5 min         Repeat accuracy       < 0.5 %	Product standard		EN 60947-5-2
Temperature drift0.05 %/KWarm up time5 minRepeat accuracy<0.5 %	Laser safety		EN 60825-1:2014
Warm up time5 minRepeat accuracy<0.5 %	Measurement accuracy		
Repeat accuracy< 0.5 %Linearity error0.5 %	Temperature drift		0.05 %/K
Linearity error 0.5 %	Warm up time		5 min
•	Repeat accuracy		< 0.5 %
Approvals and certificates	Linearity error		0.5 %
	Approvals and certificates		
UL approval E87056 , cULus Listed , class 2 power supply , type rating 1			E87056 , cULus Listed , class 2 power supply , type rating 1
CCC approval CCC approval / marking not required for products rated ≤36 V			

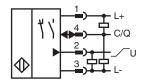
Release date: 2025-01-17 Date of issue: 2025-01-17 Filename: 295670-100360\_eng.pdf

Refer to "General Notes Relating to Pepperl+Fuchs Product Information".



Technical Data	
FDA approval	IEC 60825-1:2014 Complies with 21 CFR 1040.10 and 1040.11 except for conformance with IEC 60825-1 Ed. 3 as described in Laser Notice 56, dated May 8, 2019.
Ambient conditions	
Ambient temperature	10 50 °C (50 122 °F)
Storage temperature	-40 70 °C (-40 158 °F)
Mechanical specifications	
Degree of protection	IP67 / IP69 / IP69K
Connection	fixed cable 300 mm with M8 x 1 male connector; 4-pin
Material	
Housing	PC (Polycarbonate)
Optical face	PMMA
Mass	approx. 51 g
Dimensions	
Height	61.7 mm
Width	15 mm
Depth	41.7 mm
Cable length	0.3 m

# Connection



# **Connection Assignment**



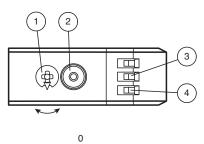
Wire colors in accordance with EN 60947-5-2

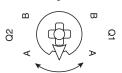
1	BN	(brown)
2	WH	(white)
3	BU	(blue)
4	BK	(black)

Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

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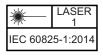
### Assembly





1	Mode rotary switch	
2	Teach-in button	
3	Switching output display Q1	YE
4	Operating indicator	GN

Q1B	Switching output/switch point B
Q1A	Switching output/switch point A
Q2A	Analog output/value A
Q2B	Analog output/value B
0	Keylock



Release date: 2025-01-17 Date of issue: 2025-01-17 Filename: 295670-100360\_eng.pdf

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# Settings

### Teach-In (TI)

Use the rotary switch for switching signal Q1 to select the relevant switching threshold A and/or B to teach in.

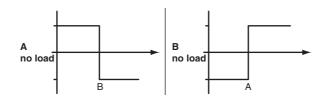
The yellow LEDs indicate the current state of the selected output.

To teach in a switching threshold, press and hold the "TI" button for approximately 1 s, until the yellow and green LEDs flash in phase. Teach-in starts when the "TI" button is released.

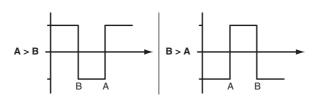
- Teach-in successful: the yellow and green LEDs flash alternately at 2.5 Hz.
- Teach-in unsuccessful: the yellow and green LEDs quickly flash alternately at 8 Hz.
- After an unsuccessful Teach-in, the sensor continues to operate with the previous valid setting after the relevant visual fault signal is issued.

Set switching mode: you can define different switching modes by teaching in the relevant distance data for switching thresholds A and B.

1. Single point mode:



2. Window mode:



Teach in switching thresholds: you can teach in or overwrite a taught-in switching threshold at any time. To do this, press the "TI" button again.

Reset a value: you can reset a taught-in value. To do this, press the "TI" button for > 4 s, until the yellow and green LEDs go out. The reset process itself starts when the "TI" button is released.

• Reset successful: the yellow and green LEDs flash alternately at 2.5 Hz.

Minimum and maximum values for the analog output Q2 are taught in and deleted in the same way as those for the switching output.

The following applies:

A = Minimum voltage/current

B = Maximum voltage/current

### **Resetting to Factory Settings**

To revert back to factory settings, press the "TI" button for > 10 s with the rotary switch set to position "O," until the yellow and green LEDs go out at the same time. The reset process itself starts when the "TI" button is released.

Reset to factory settings successful: the yellow and green LEDs light up at the same time. The sensor then continues to
operate with factory settings.

OMT-IEP

- Factory setting for switching signal Q1:
- Switching signal is high active, window mode
- Analog output: current output, 4 mA ... 20 mA absolute mode

OMT-UEP

- Factory setting for switching signal Q1:
- Switching signal is high active, window mode
- Analog output: voltage output, 0 V ... 10 V absolute mode

## Analog output

The analog output type can be configured as voltage or current output via IO-Link. The following output types are available:

- Analog output 0 mA ... 20 mA
- Analog output 4 mA ... 20 mA
- Analog output 0 V ... 10 V

Refer to "General Notes Relating to Pepperl+Fuchs Product Information



The following operating modes are available:

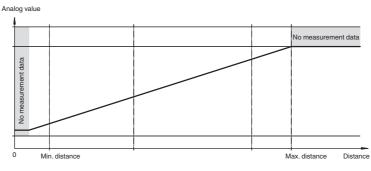
- Absolute mode (default setting)
- Normalized mode
- Rising slope
- Falling slope

The following substitute values can optionally be configured:

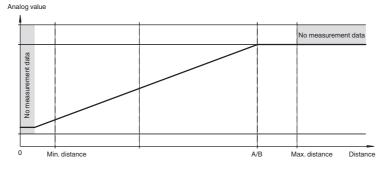
- · No substitute values used (default setting)
- Substitute value for "no measured value" used
- Substitute value for "no measured value" and "Measuring overrange" used

The sensor's tolerances are based on the digital process data.

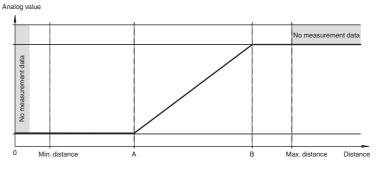
#### Absolute mode (default setting, A and B = deleted)



Normal mode ( A and B without teach-in / deleted)



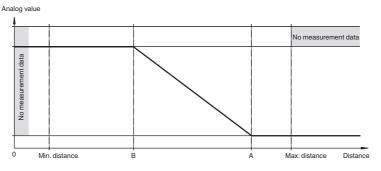
### Rising slope (A < B)



Refer to "General Notes Relating to Pepperl+Fuchs Product Information"

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#### Falling slope (A > B)



## Configuration

#### Setting different operating modes via the IO-Link interface

The devices are equipped with an IO-Link interface as standard for diagnostics and parameterization tasks to ensure optimum adjustment of the sensors to the relevant application.

#### Single point mode operating mode (one switch point):

- "Detection of objects irrespective of type and color in a defined detection range. Objects in the background are suppressed.
- "The switch point corresponds exactly to the set point.

active detection range

	Background suppression

#### Window mode operating mode (two switch points):

- Detection of objects irrespective of type and color in a defined detection range. Reliable detection when object leaves the detection range.
- Window mode with two switch points.

E

a	active detection range			
oreground suppression			Background suppression	

#### Center window mode operating mode (one switch point):

- Detection of objects irrespective of type and color in a defined detection range. Sets a defined window around a given object.
   Objects outside this window are not detected.
- Window mode with one switch point.

active de	etection range
Foreground suppression	Background suppression
<ul><li>Two point mode operating mode (hysteres</li><li>Detection of objects irrespective of type and</li></ul>	<b>is operating mode):</b> color between a defined switch-on and switch-off point.

active detection range

	active detection range	1	
Output	Hysteresis	<u> </u>	– Output
<ul><li>Inactive operating mode:</li><li>Evaluation of switching signals</li></ul>	is deactivated.		
The associated IODD device desc	ription file can be found in the	e download area at <b>w</b>	/ww.pepperl-fuchs.com.

