CE

**Model Number** 

Distance sensor

**Features** 

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•

OMT100-R100-EP-IO-V3-L

with 3-pin, M8 x 1 connector

mounting options

process data

**Product information** 

communicate via IO-Link.

their operating environment.

sensor.

Miniature design with versatile

small standardized design

and precise signal evaluation

Space-saving distance sensors in

Multi Pixel Technology (MPT) - exact

DuraBeam Laser Sensors - durable and employable like an LED IO-link interface for service and

The R100 series miniature optical sensors

are the first devices of their kind to offer an end-to-end solution in a small single standard

design - from thru-beam sensor through to a

distance measurement device. As a result of

this design, the sensors are able to perform

The entire series enables sensors to

The DuraBeam laser sensors are durable and can be used in the same way as a standard

The use of Multi Pixel Technology gives the standard sensors a high level of flexibility and

enables them to adapt more effectively to

practically all standard automation tasks.



# 8.7 5.5 M3 (2x) 11 Reveiver 9.95 5.4 37.1 44.5 Emitter 15.0

### **Electrical connection**

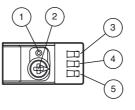


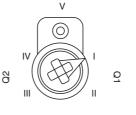
**Dimensions** 

### Pinout



### Indicators/operating means





	1	Teach-in button
	2	Mode rotary switch
Γ	3	Switch output indicator Q2
	4	Switch output indicator Q1
Γ	5	Operating indicator

Ι	Switch output 1 / switch point B
Ш	Switch output 1 / switch point A
III	Switch output 2 / switch point A
IV	Switch output 2 / B
V	Keylock



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

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General specifications           General specifications           Measurement into target do man 100 mm           General specifications           General specificationspecon specifications <th< th=""><th>Technical data</th><th></th><th>Laserlabel</th></th<>	Technical data		Laserlabel
presence signal         standard ords, 100 nm x 100 nm         standard ords, 100 nm x 100 nm         standard ords, 100 nm x 100 nm           Light source         modulated value red light         modulated value red light         modulated value red light           New red         Addet light (light ord)         modulated value red light         modulated value red light           New red         Source         Source         Source         Source           Pate length         Source         Source         Source         Source           Pate length         Source         Source         Source         Source           Angle delexion         maxe 1.3 So         Source         Source         Source           Angle delexion         maxe 1.4 So         Source         Source         Source           Angle delexion         Do Imm         Source         Source         Source         Source           Pate length         Do Imm         Source	General specifications		
Light spoe         Isam double           Later commal retrings         Mole           Later commal retrings         ACEPH Light T, DO NOT STARE INTO BEAM           Liker class         1           Beam dominon         0.5           Beam dominon         0.5           Registron rate, H-1.5         0.7           Arge dovidinon         0.6           Marge doviding returned         0.0           Function indicator         ED generic           Control dermantic         6 dermantic returned           Control dermantic         6 dermantic returned and arge           Control dermantic         6 dermantic returned and arge           Control dermantic         6 dermantic returned arge           Marge dovidin	Measurement range	40 100 mm	
Light rysm         modulation wates multiple           Laker rotating threads         1           Name         Addet Light T, DO NOT STARE INTO BEAM           Laker rotating threads         1           When shaph         600 rm           Beam divergence         -5 Frind dial Stars String in threads angle of SD nm 250 nm           Angle divergence         -5 Frind dial Stars String in threads angle of SD nm 250 nm           Angle divergence         -3 prind dial Stars String in threads angle of SD nm 250 nm           Angle divergence         -3 prind dial Stars String in threads angle of SD nm 250 nm           Angle divergence         -3 prind dial Stars String in threads angle of SD nm 250 nm           Marchen Light Time         D threads thread angle of SD nm 250 nm           Marchen Light Time         D threads thread angle of SD nm 250 nm           Marchen Light Time         D threads thread angle of SD nm 250 nm           Divergence Character Stars Stars in thread angle of SD nm 250 nm         D threads thread angle of SD nm 250 nm           Control diements         S-Stars thread thread angle of SD nm 250 nm         D thread stars thread angle of SD nm 250 nm           Control diements         S-Stars thread thread angle of SD nm 250 nm         D thread stars thread angle of SD nm 250 nm           Control diements         S-Star thread thread angle of S	5	standard white, 100 mm x 100 mm	
Light type	•		
NoiseLASER LOAT, LOO NOT STARE INTO BEAMLaser class1Wave length600 mBeen divergence600 mArge devalation3 µArge devalation82 x µArge devalation600 mArge devalation600 mArge devalation600 x µArge devalation600 x µMatter instruction600 x µMatter instruction600 x µMatter instruction50 aMatter instruction600 x µMatter instruction600 x µControl devenets6 - stan thrift instructionControl devenets6 - stan thrift instructionControl devenets000 x µMatter instruction000 x µMatter instruction000 x µMatter instruction000 x µControl devenets000 x µControl devenets000 x µMatter instruction000 x µMatter instruction000 x µMatter instruction000 x µMatter instruction00		modulated visible red light	
Later takes 1 Kave length 6 Gel on  Bean divergence  So madd 30 d3 - 1 mm in the range of 50 mm 250 mm  System  Repetition rate  approx. 5 M /  and d3 d3 - 1 mm in the range of 50 mm 250 mm  System  Repetition rate  approx. 5 M /  and d3 d3 - 1 mm in the range of 50 mm 250 mm  System  Ange divergence  So m  approx. 5 M /  ange divergence  So m  Ange divergence  So m  Ange divergence  So m  So	-		
Week regint         680 m.           Beam divergence         > 5 mard dis dis dis 1 mm in the range of 50 mm 200 mm           Puble only the every         15 J. U           Angle divergence         approx. 3 Hiz           max, build a every         15 J. U           Angle divergence         approx. 3 Hiz           Darreter of the light spot.         approx. 3 Hinz           Angle divergence         approx. 2 His           Angle divergence         approx. 2 His           Angle divergence         approx. 2 His           MTLT, fr.         90 a           Masson Time T/L         20 a           Dependent Coverage (DC)         0 %           Interfaceore/green means         Coverating (max - who coput active)           Coverating (max - who coput active)         Coverating (max - who coput active)           Coverating (max - who coput active)         Coverating (max - who coput active)           Coverating (max - who coput active)         Coverating (Max - who coput active)           Coverating (Max - who coput active)         Coverating (Max - who coput active)           Coverating (Max - who coput active)         Coverating (Max - who coput active)           Coverating (Max - who coput active)         Coverating (Max - who coput active)           Coverating (Max - who coput acting (Max - who coput acting			
Bear divergence         > 5 mat d3:d3: 1 mm in the range of 50 mm 250 mm           Puble length         S Ju           Repetion rate         Beptox. 3 Miz           max, puble array         1.5 2. nJ           Angle deviation         max. + 1.5 "           Darreter of the light spot         Beptox. 2 **           Angle deviation         Beptox. 2 **           Angle deviation         0.1 mm           Frenctional stady valited parameters         Box 0847-5 2 * 30000 Luz           Resolution         0.1 mm           Mittrag         S0 a           Masson Timu (Tag)         S0 a           Dargender the light spot         S0 a           Masson Timu (Tag)         S0 a           Dargender the light spot         Control dementis           Control dementis         State rotocall spot           Device profile         Timax: 10 %           Dev			
Puise energin         9 Ja           Repetition in a ppox. 3 Miz         Signore in Construction in activity of the intermediate of the light spot         Signore intermediate of the light spot           Demote of the light spot         appox. 3 mit at datance of 100 mm         appox. 3 mit at datance of 100 mm           Anobert light limit         EN 0047-92 : 3000 Ltz         Envelopediate of the light spot           Anobert light limit         EN 0047-92 : 3000 Ltz         Envelopediate of the light spot           Processition intermediate of the light spot         20 a         Envelopediate of the light spot           Operation indextor         ED space:         Construction intermediate of the light spot           Operation indextor         ED space:         Construction intermediate of the light spot           Control elements         C setup rotative work of the operation indextor         ED space:           Control elements         C setup rotative work of the operation indextor         ED space:           Control elements         C setup rotative work of the operation indextor         ED space:           Elements specifications         T setup rotative work of the operation indextor         ED space:           Elements specifications         T setup rotative work of the operation indextor         ED clink Mathematic work of the operation indextor           Elements specifications         T setup rotative work of the op	e e e e e e e e e e e e e e e e e e e		
Repetition rate max: pulse entropy         15.2         J           Arigle deviation max: pulse entropy         15.2         J         The section of th		-	
max. pube energy         15.2 nJ           Angle dividual         approx. 2.7           Angle of divergence         approx. 2.7           Ambert Ight limit         EN 6007-52: 30000 Lux           Rescultion         D.1 mm           Functional safety related parameters         Maximum relation relati	•	•	
Angle division         max. +1 5 °           Diameter of the ight pot a approx. 3 mm at distance of 100 mm         apple of division         apple of division         apple of 100 mm           Angle of divergence         approx. 3 mm at distance of 100 mm         apple of division         apple of division         apple of 100 mm           Resolution         0.1 mm         Excellent and division         Character of the interview of the interview of the interview of division         Character of the interview of division         Character of the interview of division           Control elements         Carter of elemats elements         Cartero elements	•		
Dameter of the light spot         apport. 2 <sup></sup> and/set of divergence         apport. 2 <sup></sup> and/set divergence         apport. 2 <sup></sup> and/set divergence         divergence         divergence           A moder tight light limit         EN 60347-56: 30000 Lux         Besodution         divergence         divergence           Massion Time (Ty)         20 a         -         divergence         divergence         divergence           Operation indicator         EED green: constantly on - sould output inactive constantly on - constant output inactive constantly on - constant output inactive constantly output inactive constantly output inactive constantly output inac			1040.10 and 1040.11 except
Angle of lowergence       approx 2*         Andberlight       EN 0697-52: 3000 Lux         Mitting       0.1 mm         Functional safety related parameters       500 a         Mascin Time (Tu)       20 a         Dagnostic Coverage (DC)       0 %         Displacional Coverage (DC)       0 %         Functional safety related parameters       Energy ener	Diameter of the light spot	approx. 3 mm at a distance of 100 mm	Laser Notice No. 50,
Bescholand         0.1mm           MTF;         Sto a           MTF;         Sto a           Michaid Trip         Sto a           Michaid Trip         Sto a           Michaid Trip         Sto a           Degradian indicator         Engrane:           Operation indicator         Engrane:           Contrait elements         Teach in the Drews of Indian indicator           Contrait elements         Teach in the Drews of Indian indicator           Contrait elements         Teach in the Drews of Indian indicator           Contrait elements         Teach in the Drews of Indian indicator           Contrait elements         Teach in the Drews of Indian indicator           Protection class         III           Interface         Indian indicator           Interface         III           Interface         III           Interface         III           Interface         IIII           Indian indicator         IIII (Si COL = pin 4.)           Durine master port by         Small Sensor           Protection class         IIII           Simulation indicator         IIIIII (Si COL = pin 4.)           Durine master port by         Operating voltage           Protection class	Angle of divergence	approx. 2 °	dated June 24, 2007
Functional safely related parameters         600 a           Mitrision Time (Ta)         600 a           Dependent Coverage (DC)         0 %           Definitions (Dependent Coverage (DC)         0 %           Definitions (Dependent Coverage (DC)         0 %           Definitions (Dependent Coverage (DC)         0 %           Function indicator         LED years: constantify on - switch odupt active constantify on - switch odupt active consmatrial switch rates active codupt active active active constanti	Ambient light limit	EN 60947-5-2 : 30000 Lux	
MTFs, Beston Time (Tg)         590 a           Mission Time (Tg)         20 a           Diagnostic Coverage (DO)         0.%           Indicators/operation indicator         LE green: constantify on- power on flashing (442) - short circult flashing with short breek (TH 14) - O Link mode           Function indicator         LED yealor: constantify on- power on flashing (442) - short circult flashing with short breek (TH 14) - O Link mode           Control elements         5-stap rotaty switch for operating modes selection           Electrical specifications         - Operating voltage           Operating voltage         Up           Protection class         10 - 0.0 V OC max. 10 %           Interface         - max 10 %           Interface pipe         - max 10 %           Interface         Min cycle sine           Proces office         Smart Asnor           Proces office         Smart Asnor           Smitching type         The default setting is: C/Q - Pink. NPN normally closed. IO-Link           Compatible master port type         A           Output         The default setting is: C/Q - Pink. NPN normally closed. IO-Link           Signal output         1 pul-pul (41 116420)           Obrage support         Up < 1.5 VOC	Resolution	0.1 mm	
Meason True (T <sub>0</sub> )       20 a         Digenetic Coverage (DC)       0%         Operation indicator       LED greenic constantly on - power on flashing (UK) - short circuil flashing with short break (1 H2) - D-Link mode LED yellow       Coverally Cover Hild.         Function indicator       LED yelew       Coverally Covera	Functional safety related parameters	i	
Despinatic Coverage (ICO)         0 %           Operation indicator         LED green: constanting (Hz), =bort circuit flashing (Hz), =bort circuit flas	MTTF <sub>d</sub>	560 a	
Indicators/operation indicator       LED green: operation indicator       LED green: operation indicator       LED green: operation indicator       If LeD indicator         Function indicator       LED green: operation indicator       LED green: operation indicator       If LeD indicator         Control elements       5-step rotary switch for operating modes selection       If LeD indicator         Function indicator       5-step rotary switch for operating modes selection       If LeD indicator         Function indicator       5-step rotary switch for operating modes selection       If LeD indicator         Finple       max 10 %       Control elements       5-step rotary switch for operating modes selection         Finple       max 10 %       Control (Control	Mission Time (T <sub>M</sub> )	20 a	
Indicators/operation indicator       LED green: operation indicator       LED green: operation indicator       LED green: operation indicator       If LeD indicator         Function indicator       LED green: operation indicator       LED green: operation indicator       If LeD indicator         Control elements       5-step rotary switch for operating modes selection       If LeD indicator         Function indicator       5-step rotary switch for operating modes selection       If LeD indicator         Function indicator       5-step rotary switch for operating modes selection       If LeD indicator         Finple       max 10 %       Control elements       5-step rotary switch for operating modes selection         Finple       max 10 %       Control (Control	Diagnostic Coverage (DC)	0 %	
Operation indicator         LED green: constantly on - switch output active constantly output output interface interface by No-load support up output constantly councel to No club support vector polaring volation that active sparate protection class interface by No club support vector polaring volation that active sparate protection class interface by No club support vector polaring volation that active solution support vector polaring volation that active solution gover output solution that active solution gover outpu			
Control alements     Orasistinity on - switch output active constantity on - switch or operating modes selection     Accessories       Control alements     5 step rotay switch for operating modes selection     V31-GM-2M-PUR       Pipple     max. 10 %     Frankle Accessories       No-load supply current     10     25 mar. 10 %       No-load supply current     10     25 mar. 10 %       Interface Sype     0-Link (via C/G = pin 4)     0-Link Master 2005       Device profile     Smart Sensor     0-Link Master 2005       No-load supply current     0 max     0 %       Nin. cycle inrent     COM 2 (28 k 4 Baud)     0-Link Master 2005       No-load support     11     10       Nin. cycle inrent     Smart Sensor     0-Link Master 2005       Rooces data witch     Process data lato 12 Bit     0-Link Master 2005       Process data witch     Y8     0-Link (Ya C/G)       Process data witch     Y8     0-Link (Ya C/G)       Signal output     Y8     0-Link (Ya C/G)       Signal output     The default setting is: C/G - Pink / KPN formally cosen, IPN formally closed, IO-Link       Signal output     Extended     Extended       Switching voltage     max 30 VD C     Y8       Switching voltage     Extended     Extended       Voltage dropy     Q0 S %     Y8 </td <td>Operation indicator</td> <td>constantly on - power on flashing (4Hz) - short circuit</td> <td>Complies with 21 CFR 1040.10 and 1040.11 except for deviations pursuant to</td>	Operation indicator	constantly on - power on flashing (4Hz) - short circuit	Complies with 21 CFR 1040.10 and 1040.11 except for deviations pursuant to
Control elements         Setsp totary switch for operating modes selection           Electrical specifications         UB           Electrical specifications         UB         Setsp totary switch for operating modes selection           Ripple         max. 10 %         Setsp totary switch for operating modes selection           Notad suppl current         I         Control Sets         Setsp totary switch for operating modes selection           Interface         Image: Setsp totary switch for operating modes selection         Setsp totary switch for operating modes selection           Device profile         Control Setsp totary switch for operating modes selection         Setsp totary switch for operating modes selection           Interface type         Image: Setsp totary switch for operating modes selection         Setsp totary switch for operating modes selection         Setsp totary switch for operating modes selection           SlO mode support         Setsp totary switch for operating is:         Conversite for totary setsp totary setsp totary setsp totary protected overvoltage protected         Switching type         The default setting is:         Conversite for totary setsp totary setsp totary setsp totary setsp totary protected overvoltage protected         Switching current         Setsp totary setsp to	Function indicator	constantly on - switch output active	
Electrical specifications         Unit of the default setting is: Corporating voltage         Unit of the default setting is: Corporation interface	Control elements	Teach-In key	Accessories
Electrications         Female cordset, M8, 4-pin, PUR cable           Ripple         max. 10 %           No-load supply ourment         lo           Voltage         Ug           No-load supply ourment         lo           Interface         III           Interface type         IO-Link (via C/Q = pin 4)           Device profile         Smart Sensor           Transfer rata         COM2 (38.4 kBaud)           IO-Link Revision         1.1           Min. cycle time         3 ms           Process data witch         Process data output 2 Bit           SiO mode support         Yee           Process data witch         Process data output 2 Bit           SiO mode support         Yee           Output         The default setting is:           C/Q - Pin4: NPN normally open, PNP normally closed, IO-Link           Signal output         CIC - Pin4: NPN normally closed, IO-Link           Signal output         2 1.5 V DC           Signal output         EG 61131.4           Voltage drop         Ug           Usage category         DC-12 and DC-13           Voltage drop         Ug           Usage category         DC-12 and DC-13           Voltage drop         Ug         Sink <td>Control elements</td> <td>5-step rotary switch for operating modes selection</td> <td>V31-GM-2M-DUR</td>	Control elements	5-step rotary switch for operating modes selection	V31-GM-2M-DUR
Operating VollageOp1080 VECV31-WM-2M-PURNo-lead supply currentto<25 mA at 24 V supply voltage	Electrical specifications		
No-ioad supply current     I     <25 mA at 24 V supply voltage	Operating voltage U <sub>B</sub>	10 30 V DC	remaie corusel, Mo, 4-pin, FOR cable
Protection class       III         Interface       Interface type         Interface type       IO-Link (Via C/O = pin 4)         Device profile       Smart Sensor         Transfer rate       COMV (38.4 kBaud)         IO-Link Revision       1.1         Min. cycle time       3 ms         Process data witch       Process data output 2 Bit         SIO mode support       yes         Device ID       0x110904 (1116420)         Compatible master port type       A         Output       Switching type         Signal output       The default setting is:         C/Q - Pink XPN normally open, PNP normally olosed, IO-Link         Signal output       1 push-pull (4 in 1) output, short-circuit protected, reverse polarity protected, reverse polarity protected, overvoltage protected         Switching current       max. 100 mA, resistive load         Usage category       DC-12 and DC-13         Voltage drop       Ug 4 S V DC         Response time       2 ms         Conformity       Communication interface         Contruit standard       EN 60947-5-2         Laser safely       EN 60947-5-2         Laser safely       No.63 % K         Mainet conditions       Mainet conditions         Anb			V31-WM-2M-PUR
Interface         IO-Link (via C/0 = pin 4)         IO-Link Master02-USB           Device profile         Smart Sensor         IO-Link Master0.2-USB           Transfer rate         COM 2 (38.4 kBaud)         IO-Link Master0.2-USB           IO-Link Revision         1.1         Min. cycle time         Smart Sensor           Min. cycle time         Smart Sensor         Spart Sensor         Spart Sensor           Process data vittch         Process data input 3 Byte         Spart Sensor         Spart Sensor           Process data vittch         Process data output 2 Bit         Other suitable accessories can be found a www.pepperl-fuchs.com           SiO mode support         yes         Device ID         Output 100-Link Master02-USB           SiO mode support         yes         Device ID         Output 0           SiO mode support         yes         Device ID         Output 0           Signal output         1 push-pull (4 in 1) output, short-circuit protected, reverse polarity protected, overonitage protected         Now.pepperl-fuchs.com           Switching voltage         max. 100 mA, resistive load         Device Profile Sensor Senso			Female cordset, M8, 4-pin, PUR cable
Interface type         IO-Link (via C/O = pin 4)         IO-Link profile         Smart Sensor           Device profile         Smart Sensor         separate power supply, LED indicators, M12 plug for sensor connection           IO-Link Revision         1.1         Min. cycle time         Sms           Process data witch         Process data output 2 Bit         Min. cycle time         Min. cycle time           SIO mode support         yes         Ves         Ves           Device ID         Ox10904 (1116420)         Ox10904 (1116420)           Compatible master port type         A         A           Output         The default setting is:         C/C/2 - Pin4. NPN normally open, PNP normally closed, IO-Link           Signal output         1 push-pull (4 in 1) output, short-circuit protected, reverse polarity protected, overovitage protected         Signal output           Signal output         max. 100 mA, resistive load         Usage category         DC-1 and DC-13           Voltage deop         U_g         1.5 V DC         Seconsentime         Zms           Communication interface         IEC 61131-9         Seconsentime         Seconsentime           Communication interface         IEC 61131-9         Seconsentime         Seconsentime           Laser safety         0.03 %/K         Seconsentime         Seconsentime		III	IO Link Maatar02 USB
Device profile     Smart Sensor     Separate power supply. LED indicators, separate power supply. LED indicators, M12 plug for sensor connection       OL-Link Revision     1.1       Min. cycle time     3 ms       Process data witch     Process data output 2 Bit       SiO mode support     yes       Device ID     Ox110904 (1116420)       Compatible master port type     A       Output     The default setting is: C/C - Pin4: NPN normally open, PNP normally closed, IO-Link       Signal output     1 push-pull (4 in 1) output, short-circuit protected, reverse polarity protected overvoltage protected       Switching voltage     max. 30 VDC       Switching output     1.5 VDC       Besponse time     2 ms       Conformity     2 ms       Conformity     EC 61131-9       Product standard     EK 60947-5-2       Laser safety     EN 60925-1:2014       Measurement accuracy     5 0.5 %       Linearity error     0.03 %/K       Warm up time     5 min       Response time     2 min       Rober entrome     40 70 °C (40 158 °P)       Measurement accuracy     40 70 °C (40 158 °P)       Measing width     11 mm       Housing height     44.5 mn		10  Link(vis C/0, rin A)	
Transfer rateCOM 2 (38.4 kBaud)Bit Mindardis, M12 plug for sensor connectionIO-Link Revision1.1M12 plug for sensor connectionMin. cycle time3 msM12 plug for sensor connectionProcess data witchProcess data input 3 Byte Process data output 2 BitM12 plug for sensor connectionSiO mode supportyeswww.pepperl-fuchs.comDevice ID0x110904 (1116420)www.pepperl-fuchs.comCompatible master port typeAM12OutputThe default setting is: Cr(2 - Pin4: NPN normally open, PNP normally closed, IO-LinkSignal output1 push-pull (4 in 1) output, short-circuit protected, reverse polarity protected, overvoitage protectedSwitching votagemax. 30 V DCSwitching votagemax. 30 V DCSwitching urrentmax. 100 mA, resistive loadUsage categoryDC-12 and DC-13Voltage dropU dCommunication interfaceIEC 61131-9Product standardEN 60947-5-2Laser safetyEN 60947-5-2Laser safetyEN 60947-5-2Laser safetyEN 60947-5-2Laser safetySo 5 %Linearity error± 0.75 %Ambient conditionsResponse tume10 60 °C (50 140 °F)Storage temperature-40 70 °C (40 158 °F)Mechanical specificationsHousing width11 mmHousing width11 mmHousing width11 mm		,	
IO-Link Revision     1.1     Min cycle time     3 ms       Min. cycle time     3 ms     Other suitable accessories can be found a www.pepperl-fuchs.com       Process data withh     Process data uput 3 Byte Process data uput 2 Bit     Other suitable accessories can be found a www.pepperl-fuchs.com       SlO mode support     yes     Other suitable accessories can be found a www.pepperl-fuchs.com       Device ID     0x110904 (1116420)     owww.pepperl-fuchs.com       Compatible master port type     A       Output     The default setting is: C/Q - Pin4: NPN normally open, PNP normally closed, IO-Link       Signal output     1 push-pull (4 in 1) output, short-circuit protected, reverse polarity protected, overvoltage protected       Switching voltage     max. 30 V DC       Switching voltage     max. 30 V DC       Switching voltage orpo     Ug       Voltage drop     Ug       Contormity     EC 61131-9       Product standard     EN 60825-1:2014       Measurement accuracy     S0.5 %.       Linearity error     1060 °C (50 140 °F)       Ambient conditions     Tomperature       Ambient temperature     1060 °C (50 140 °F)       Storage temperature     -40 70 °C (40 158 °F)       Measurement accuracy     0.5 %.       Linearity error     10 70 °C (40 158 °F)       Measurement accifications			
Min. cycle time     3 ms     Other suitable accessories can be found a www.pepperl-fuchs.com       Process data witch     Process data output 2 Bit     www.pepperl-fuchs.com       SiO mode support     yes     www.pepperl-fuchs.com       Device ID     0x110904 (1116420)     compatible master port type     A       Output      C/G - Pin4: NPN normally open, PNP normally closed, IO-Link     SiG nal output     1 push-pull (4 in 1) output, short-circuit protected, reverse polarity protected, overvoltage protected     Switching voltage     max. 30 V DC       Switching voltage     max. 30 V DC     Switching current     max. 30 V DC       Switching current     max. 30 V DC     Switching current     max. 30 V DC       Response time     2 ms     Communication interface     EIC 61131-9       Product standard     EN 60947-5-2     Easer safety     EN 60947-5-2       Laser safety     0.03 %/K     Martine protected     Switching voltage       Warm up time     5 min     Sma     Sma       Repeat accuracy     < 0.5 %		· · · · · ·	M12 plug for sensor connection
Process data witchProcess data input 3 Byte Process data output 2 Bitwww.pepperl-fuchs.comSIO mode supportyesDevice ID0x110904 (1116420)Compatible master port typeASwitching typeThe default setting is: C/G - Pin4: NPN normally closed, IO-LinkSignal output1 push-pull (4 in 1) output, short-circuit protected, reverse polarity protected, overvoltage protectedSwitching voltagemax. 30 V DCSwitching currentmax. 30 V DCSwitching currentmax. 30 V DCSwitching currentmax. 100 mA, resistive loadUsage actegoryDC-12 and DC-13Voltage dropUd g ≤ 1.5 V DCResponse time2 msConformityEN 60847-5-2Communication interfaceIEC 61131-9Product standardEN 60847-5-2Laser safetyEN 60847-5-2Temperature drift0.03 %/KWarm up time5 minRespeat accuracy< 0.5 %			Other suitable accessories can be found at
Device IDOx110904 (1116420)Compatible master port typeAOutputThe default setting is: C/Q - Pin4: NPN normally open, PNP normally closed, IO-LinkSignal output1 push-pull (4 in 1) output, short-circuit protected, reverse polarity protected, overvoltage protectedSwitching voltagemax. 30 V DCSwitching currentmax. 100 mA , resistive loadUsage categoryDC-12 and DC-13Voltage dropUd d2 msSoutoma (11 - 9)Product standardEC 61131-9Product standardEN 60947-5-2Laser safetyEN 60947-5-2Laser safetyEN 60947-5-2Laser safetySoninMeasurement accuracy≤ 0.5 %Linearity error± 0.75 %Linearity error± 0.75 %Ambient conditions		Process data input 3 Byte	
Compatible master port typeAOutputSwitching typeThe default setting is: C/Q - Pin4: NPN normally closed, IO-LinkSignal output1 push-pull (4 in 1) output, short-circuit protected, reverse polarity protected, overvoltage protectedSwitching voltagemax. 30 V DCSwitching voltagemax. 30 V DCSwitching currentmax. 100 mA, resistive loadUsage categoryDC-12 and DC-13Voltage dropU_d ≤ 1.5 V DCResponse time2 msComformityEC 61131-9Product standardEC 61131-9Product standardEN 60947-5-2Laser safetyEN 60825-11:2014Measurement accuracy5.05 %Temperature drift0.03 %/KWarm up time5 minRepeat accuracy≤ 0.55 %Linearity error± 0.75 %Ambient conditions		•	
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Housing height 44.5 mm	Storage temperature	-40 70 °C (-40 158 °F)	
	Storage temperature Mechanical specifications	`````	
	Storage temperature Mechanical specifications Housing width	11 mm	

2

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Degree of protection	IP67 / IP69 / IP69K		
Connection	M8 x 1 connector, 3-pin		
Material			
Housing	PC (Polycarbonate)		
Optical face	PMMA		
Mass	approx. 10 g		
Approvals and certificates			
UL approval	E87056 , cULus Listed , class 2 power supply , type rating 1		
FDA approval	IEC 60825-1:2007 Complies with 21 CFR 1040.10 and 1040.11 except for deviations pursuant to Laser Notice No. 50 dated June 24, 2007		

#### Preferences

#### Teach-In:

You can use the rotary switch to select the relevant switching threshold A and/or B for teaching in for switch signal Q1 or Q2.

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

To store a threshold value, press and hold the "TI" button until the yellow and green LEDs flash in phase (approx. 1 s). Teach-In starts when the "TI" button is released.

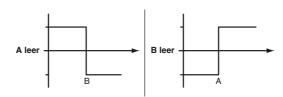
Successful Teach-In is indicated by alternating flashing (2.5 Hz) of the yellow and green LEDs.

An unsuccessful Teach-In is indicated by rapidly alternating flashing (8 Hz) of the yellow and green LEDs.

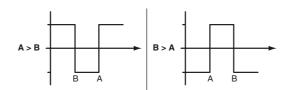
After an unsuccessful Teach-In, the sensor continues to operate with the previous valid setting after the relevant visual fault signal is issued. Different switching modes can be defined by teaching in the relevant distance measured values

for the switching thresholds A and B:

Single point mode:



Window mode:



Every taught-in switching threshold can be retaught (overwritten) by pressing the "TI" button again.

Pressing and holding the "TI" button for > 4 s completely deletes the taught-in value. The yellow and green LEDs go out simultaneously to indicate that this procedure has been completed. Successful resetting is indicated by alternating flashing (2.5 Hz) of the vellow and green LEDs.

#### **Resetting to Factory Default Settings**

Press the "TI" button for > 10 s in rotary switch position "O' to reset to factory default settings. The yellow and green LEDs go out simultaneously to indicate the resetting.

Resetting process starts when the "TI" button is released and is indicated by the yellow LED. After the process the sensor works with factory default settings, immediately.

OMT:

- · Factory default settings switch signal Q1:
- Switch signal active, window mode
- Factory default settings switch signal Q2:
- Switch signal active, window mode

OQT:

ena.xml

267075-100087

- · Factory default settings switch signal Q1:
- Switch signal active, BGS mode (background suppression)
- Factory default settings switch signal Q2: Switch signal active, BGS mode (background suppression)

### **Configuration via IO-Link interface**

### 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

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Background suppression



## OMT100-R100-EP-IO-V3-L

### 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.

active detection range **Background suppression** Foreground 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 detection range						
Foreground suppression	Background suppression					

active detection range

### Two point mode operating mode (hysteresis operating mode):

• Detection of objects irrespective of type and color between a defined switch-on and switch-off point.

	4	active detection r	ange	
				Output
Output	•	Hysteresis	<b>_</b>	Output
Output				

Inactive operating mode:

• Evaluation of switching signals is deactivated.

The associated IODD device description file can be found in the download area at www.pepperl-fuchs.com.

