



CE





Model Number

OBR15M-R200-2EP-IO

Retroreflective sensor with polarization filter

with fixed cable

Features

- Medium design with versatile mounting options
- Extended temperature range -40°C ... 60°C
- · High degree of protection IP69K
- IO-link interface for service and process data

Product information

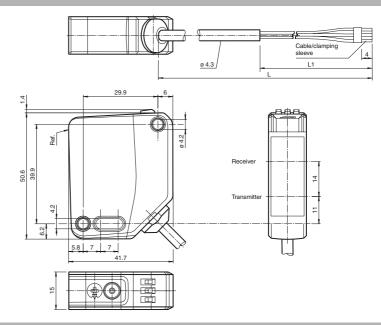
The optical sensors in the series are the first devices to offer an end-to-end solution in a medium-sized standard design—from the thru-beam sensor through to the measuring distance sensor. As a result of this design, the sensors are able to perform practically all standard automation tasks.

The entire series enables sensors to communicate via IO-Link.

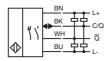
The DuraBeam laser sensors are durable and can be used in the same way as a standard sensor.

Multi Pixel Technology (MPT) ensures that the standard sensors are flexible and can be adapted to the application environment.

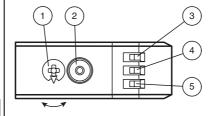
Dimensions



Electrical connection



Indicators/operating means



1	Sensitivity adjustment	
2	Light-on / dark-on changeover switch	
3	Operating indicator / dark on	GN
4	Signal indicator	YE
5	Operating indicator / light on	GN



Mission Time (T _M) 20 a Diagnostic Coverage (DC) 0 % Indicators/operating means Operation indicator Function indicator Func	Technical data		
Reflector distance	General specifications		
Threshold detection range	Effective detection range		0 15 m
Reference target	Reflector distance		0.02 15 m
Light source Light type	Threshold detection range		18.5 m
Light source LED LED risk group labelling exempt group Polarization filter yes Jample of divergence 2 ° Angle of divergence 2 ° Ambient light limit EN 60947-5-2: 60000 Lux Functional safety related parameters MITTF, 74 MISSION Time (T _M) 20 a Diagnostic Coverage (DC) 0 % Micators/operating means Use of micators of the light spot and part of the part	Reference target		H85-2 reflector
Light type	-		LED
ED risk group labelling	=		modulated visible red light
Polarization filter	• ,.		-
Diameter of the light spot Angle of divergence 2" Angle of divergence 3" Angle of divergen	• .		
Ambient light limit			•
Ambient light limit Functional safety related parameters Mission Time (T ₁₄₎ 20 a Mission Time (T ₁₄₎ 20 a Diagnostic Coverage (DC) 0% Indicators/operating means Operation indicator Operation indicator Operation indicator Control elements Control elements Electrical specifications Operating voltage Ug 10 30 V DC Ripiple max. 10 % No-load supply current log 18 max 12 4 V Operating voltage Interface Interface type O-Link (via C/Q = BK) Device profile Min. cycle time 2.3 ms Process data vitch Min. cycle time SiOm do support Device ID Compatible master port type Output Switching type Signal output Signal output Signal output Since Signal output Sion as 18 via V	U 1		* *
### STEP Transfer Table			_
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Mission Time (T _M) 20 a Diagnostic Coverage (DC) 0 % Indicators/operating means Secondary (Constantly on - power on flashing (4Hz) - short circuit (1 flashing with short break (1 Hz) - IO-Link mode Function indicator Yellow LED: Permanently in: light path clear Permanently if: light path clear	Functional safety related para	ameters	
Diagnostic Coverage (DC) Indicators/operating means Operation indicator Depration indicator Eunction indicator Function ind	MTTF _d		724 a
Indicators/operating means Operation indicator Department on the constantity on - power on constantity on - power on flashing (Haz) - short circuit flashing with short break (1 Hz) - IO-Link mode Function indicator Function indicator Function indicator Permanently it - light path clear Permanently it - object detected Flashing (4 Hz) - insufficient operating reserve Light-on/dark-on changeover switch sensitivity adjustment Electrical specifications Operating voltage Ug 10 30 V DC Ripple max. 10 % No-load supply current I0 < 18 mA at 24 V Operating voltage Ill Interface Interface Interface	Mission Time (T _M)		20 a
Depreation indicator LED green: constantly on - power on flashing (4Hz) - short circuit flashing with short break (1 Hz) - IO-Link mode Function indicator Function indicator Function indicator Yellow LED: Permanently lit - light path clear Permanently int - logical detected Flashing (4 Hz) - insufficient operating reserve Light-on/dark-on changeover switch Sensitivity adjustment Electrical specifications Operating voltage III Interface III Interface Interface Vpe Operating voltage Operating voltage Operating voltage III Interface III Interface Vpe Operating voltage Operating voltage Operating voltage III Interface Vpe Operating voltage Operating voltage Operating voltage Operating voltage III Interface Vpe Operating voltage Operating voltage III Interface Vpe Operating voltage Operating voltage III Interface Vpe Operating voltage III Interface Operating voltage III Interface III Interface Operating voltage III Interface III	Diagnostic Coverage (DC)		0 %
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Permanently lif - light path clear Permanently of - object detected Flashing (4 Hz) - insufficient operating reserve Control elements	·		constantly on - power on flashing (4Hz) - short circuit flashing with short break (1 Hz) - IO-Link mode
Control elements Control elements Control elements Control elements Control elements Sensitivity adjustment Electrical specifications Operating voltage UB Ripple Max. 10 % No-load supply current IQ No-load supply leading l	Function indicator		Permanently lit - light path clear Permanently off - object detected
Control elements sensitivity adjustment Electrical specifications Operating voltage Ripple No-load supply current Protection class III Interface Interface Interface Interface Interface Interface Interface Interface Interface ODW 2 (38.4 kBaud) IO-Link (via C/Q = BK) Min. cycle time Process data witdh Process data input 2 Bit Process data output 2 Bit Process data output 2 Bit SIO mode support Device ID Compatible master port type A Output Switching type The switching type of the sensor is adjustable. The default setting is: C/Q - BK. NPN normally closed / light-on, PNP normally closed in the face of the face of the polarity protected, reverse polarity protected, reverse polarity protected on max. 30 V DC Switching current Usage category DC-12 and DC-13 Switching frequency Frequency Switching frequency Frequ	Control elements		
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Operating voltage U _B 10 30 V DC max. 10 % Ripple max. 10 % No-load supply current I ₀ < 18 mA at 24 V Operating voltage Interface III Interface Profile Identification and diagnosis Smart Sensor type 2.4 Transfer rate COM 2 (38.4 kBaud) IO-Link Revision 1.1 Min. cycle time 2.3 ms Process data width Process data input 2 Bit Process data voluput 2 Bit Process data output 2 Bit SIO mode support yes Device ID 0x111201 (1118721) Compatible master port type A Output Switching type The switching type of the sensor is adjustable. The default setting is: C/O = MK: NPN normally open / dark-on, PNP normally close light-on, PNP normally open dark-on. PNP normally closed flight-on, PNP normally open dark-on. Signal output 2 push-pull (4 in 1)outputs, short-circuit protected, reverse polarity protected, overvoltage protected Switching voltage max. 30 V DC Switching current max. 30 V DC Switching frequency f 1000 Hz Response tim			ochodivity adjustinent
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No-load supply current I_0 < 18 mA at 24 V Operating voltage III	·	υ _B	
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Device profile	Protection class		III
Device profile	Interface		
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Housing depth 41.7 mm Degree of protection IP67 / IP69 / IP69K Connection 2 m fixed cable Material Housing PC (Polycarbonate)	Housing width		15 mm
Housing depth 41.7 mm Degree of protection IP67 / IP69 / IP69K Connection 2 m fixed cable Material Housing PC (Polycarbonate)	Housing height		50.6 mm
Degree of protection IP67 / IP69 / IP69K Connection 2 m fixed cable Material Housing PC (Polycarbonate)			41.7 mm
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Accessories

IO-Link-Master02-USB

IO-Link master, supply via USB port or separate power supply, LED indicators, M12 plug for sensor connection

OMH-MLV12-HWK

Mounting bracket for series MLV12 sensors

OMH-R200-01

Mounting aid for round steel ø 12 mm or sheet 1.5 mm ... 3 mm

OMH-R20x-Quick-Mount

Quick mounting accessory

OMH-MLV12-HWG

Mounting bracket for series MLV12 sensors

REF-H85-2

Reflector, rectangular 84.5 mm x 84.5 mm, mounting holes

REF-C110-2

Reflector, round ø 84 mm, central mounting hole

REF-H50

Reflector, rectangular 51 mm x 61 mm, mounting holes, fixing strap

REF-VR10

Reflector, rectangular 60 mm x 19 mm, mounting holes

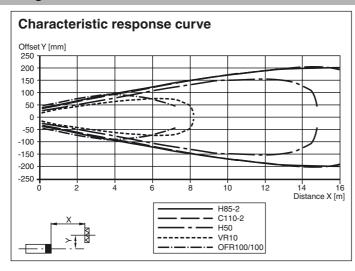
OFR-100/100

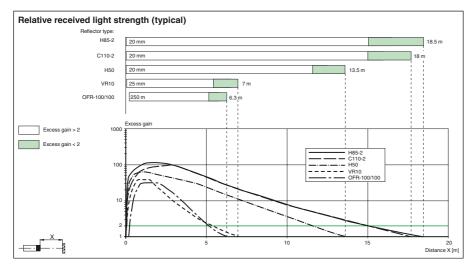
Reflective tape 100 mm x 100 mm

Other suitable accessories can be found at www.pepperl-fuchs.com

Release date: 2018-05-22 17:12 Date of issue: 2019-10-31 295670-100011_eng.xml

Curves/Diagrams





Functions and Operation

To unlock the adjustment functions turn the sensing range /sensitivity adjuster for more than 180 degrees.

Sensing Range / Sensitivity

Turn sensing range / sensitivity adjuster clockwise to increase sensing range / sensitivity.

Turn sensing range / sensitivity adjuster counter clockwise to decrease sensing range / sensitivity.

If the end of the adjustment range is reached, the signal indicator starts flashing with 8 Hz.

Light-on / Dark-on Configuration

Press the light-on / dark-on changeover switch for more than 1 second (less than 4 seconds). The light-on / dark-on mode changes and the operating indicators are activated accordingly.

If you press the light-on / dark-on changeover switch for more than 4 seconds, the light-on /dark-on mode changes back to the original setting. On release of the light-on / dark-on changeover switch the current state is activated.

Restore Factory Settings

Press the light-on / dark-on changeover switch for more than 10 seconds (less than 30 seconds) until all LEDs turn off. On release of the light-on / dark-on changeover switch the signal indicator turns on. After 5 seconds the sensor resumes operation with factory default settings.

After 5 minutes of inactivity the sensing range / sensitivity adjustment is locked. In order to reactivate the sensing range / sensitivity adjustment, turn the sensing range / sensitivity adjuster for more than 180 degrees.