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Model Number

OBR15M-R201-EP-IO-V3

Retroreflective sensor with 3-pin, M8 x 1 connector

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.

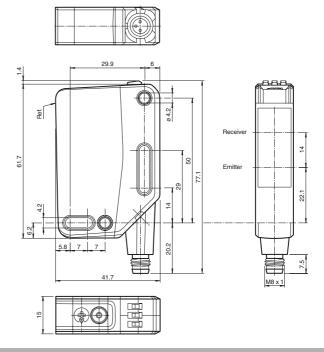
The entire series enables sensors to communicate via IO-Link.

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



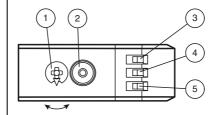
Pinout

Wire colors in accordance with EN 60947-5-2



BN (brown)
BU (blue)
BK (black)

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



General specifications		
Effective detection range		0 15 m
Reflector distance		0.02 15 m
Threshold detection range		18.5 m
Reference target		H85-2 reflector
Light source		LED
Light type		modulated visible red light
LED risk group labelling		exempt group
Polarization filter		yes
Diameter of the light spot		approx. 520 mm at a distance of 15 m
Angle of divergence		2°
Ambient light limit		EN 60947-5-2 : 60000 Lux
Functional safety related parame	ters	
MTTF _d		724 a
Mission Time (T _M)		20 a
Diagnostic Coverage (DC)		0%
Indicators/operating means		0,0
Operation indicator		LED green:
		constantly on - power on flashing (4Hz) - short circuit flashing with short break (1 Hz) - IO-Link mode
Function indicator		Yellow LED: Permanently lit - light path clear Permanently off - object detected Flashing (4 Hz) - insufficient operating reserve
Control elements		Light-on/dark-on changeover switch
Control elements		sensitivity adjustment
Electrical specifications		
Operating voltage	U _B	10 30 V DC
Ripple		max. 10 %
No-load supply current	I ₀	< 18 mA at 24 V Operating voltage
Protection class	U	III
Interface		
Interface type		IO-Link (via C/Q = pin 4)
Device profile		Identification and diagnosis
Device profile		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 witdh		Process data input 2 Bit
. 100000 data man		Process data output 2 Bit
SIO mode support		yes
Device ID		0x111211 (1118737)
Compatible master port type		A
Output		
Switching type		The switching type of the sensor is adjustable. The default
Ownerming type		setting is: C/Q - Pin4: NPN normally open / dark-on, PNP normally closer light-on, 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 current		max. 100 mA, resistive load
Usage category		DC-12 and DC-13
Voltage drop	U _d	≤ 1.5 V DC
Switching frequency	f	1000 Hz
Response time		0.5 ms
Conformity		
Communication interface		IEC 61131-9
		EN 60947-5-2
Product standard		
Product standard Ambient conditions Ambient temperature		-40 60 °C (-40 140 °F)
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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-RL31-02

Mounting bracket narrow

OMH-RL31-03

Mounting bracket narrow

OMH-RL31-04

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

OMH-RL31-07

Mounting bracket including adjustment

OMH-R20x-Quick-Mount

Quick mounting accessory

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

V3-WM-2M-PUR

Female cordset single-ended, M8, 3-pin, PUR cable

V3-GM-2M-PUR

Female cordset single-ended, M8, 3-pin, PUR cable

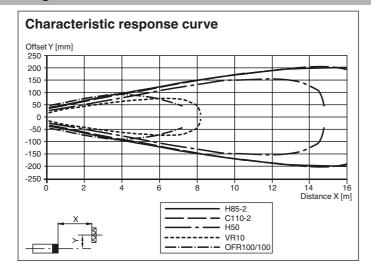
Other suitable accessories can be found at www.pepperl-fuchs.com

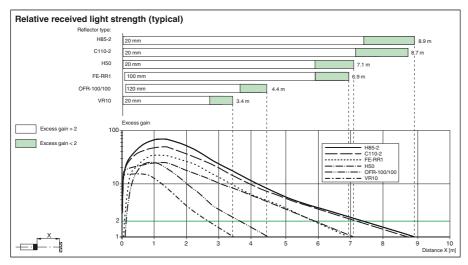
FPEPPERL+FUCHS

Date of issue: 2019-10-31 295670-100060_eng.xml Release date: 2019-03-26 09:56 UL approval
CCC approval

E87056 , cULus Listed , class 2 power supply , type rating 1 CCC approval / marking not required for products rated \leq 36 V

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.