



Model Number

RLK28-55-Z/31/116

Retroreflective sensor with terminal compartment

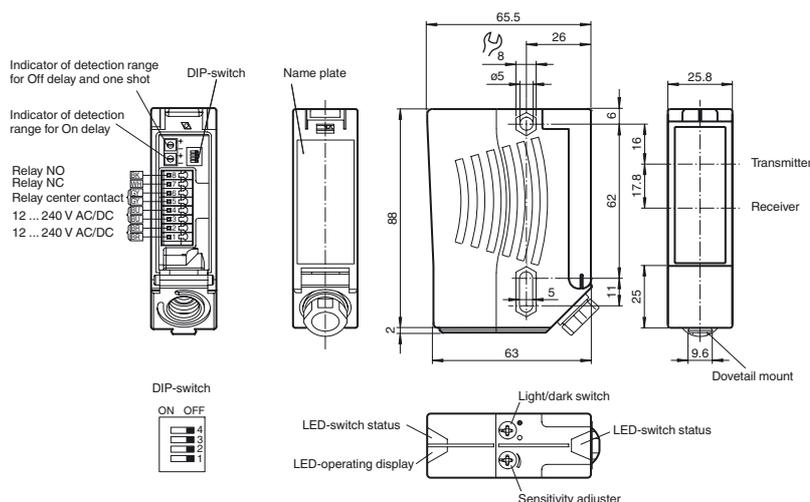
Features

- Universal series with highly versatile fields of use
- Resistant against noise: reliable operation under all conditions
- Programmable time function GAN, GAB, IAB, as well as GAN-GAB and GAN-IAB as double function
- Version with red light
- Version with relay output

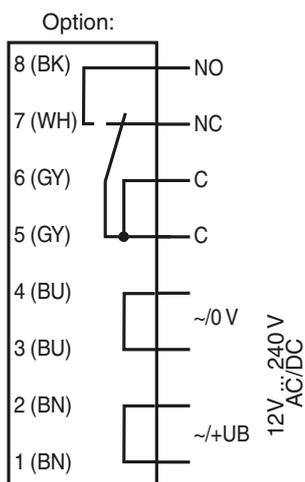
Product information

The series 28 family of sensors can be universally used. It has a large range of models that allows it to be integrated into any automation environment. The sensors are contained in sturdy water resistant plastic housings with multiple fastening options and scratch resistant optical cover. Features such as a timer function, and functions including a light/dark switch, sensitivity adjuster and highly visible status LEDs make for less effort on the part of the user and streamline installation, setup and operation. Just about any task associated with positioning, moving, conveying and monitoring can be accomplished with these sensors.

Dimensions



Electrical connection



The relay-functions "NC" and "NO" bear on the switching mode "Dark-ON". This complies to the default setting of the light/dark switch (factory setting).

Release date: 2015-10-28 14:44 Date of issue: 2015-10-28 13:4130_eng.xml

Technical data**General specifications**

Effective detection range	0 ... 17 m
Reflector distance	0.05 ... 17 m
Threshold detection range	21 m
Reference target	H85-2 reflector
Light source	LED
Light type	modulated visible red light
Polarization filter	yes
Diameter of the light spot	approx. 290 mm at a distance of 17 m
Angle of divergence	emitter 1.2° receiver 2°
Ambient light limit	80000 Lux

Functional safety related parameters

MTTF _d	600 a
Mission Time (T _M)	20 a
Diagnostic Coverage (DC)	0 %

Indicators/operating means

Operation indicator	LED green
Function indicator	2 LEDs yellow, light up when light beam is free, flash when falling short of the stability control, off when light beam is interrupted
Control elements	sensitivity adjustment (Adjustment to < 25% of the effective operating range) , Light/Dark switch

Electrical specifications

Operating voltage	U _B	12 ... 240 V AC/DC
Power consumption	P ₀	≤ 3.5 VA

Output

Switching type	light/dark on switchable	
Signal output	Relay, 1 alternator	
Switching voltage	max. 250 V AC/DC	
Switching current	max. 2 A	
Switching power	DC: max. 50 W AC: max. 500 VA	
Switching frequency	f	25 Hz
Response time	20 ms	
Timer function	ON delay (GAN), OFF delay (GAB), one shot (IAB), ON delay-one shot (GAN-IAB), ON delay-OFF delay (GAN-GAB), programmable adjustment interval 0.1 ... 10 s	

Ambient conditions

Ambient temperature	-40 ... 60 °C (-40 ... 140 °F)
Storage temperature	-40 ... 75 °C (-40 ... 167 °F)

Mechanical specifications

Degree of protection	IP67
Connection	terminal compartment with 8 spring-loaded terminals for wire cross section 0.5 ... 1.5 mm ² , Insulation stripping 7.5 ... 8.5 mm, M16 x 1.5 cable gland
Material	
Housing	Plastic ABS
Optical face	Plastic pane
Mass	112 g

Compliance with standards and directives

Directive conformity	
Low Voltage Directive 2006/95/EC	EN 60947-5-2:2007 + A1:2012
EMC Directive 2004/108/EC	EN 60947-5-2:2007 + A1:2012
Standard conformity	
Product standard	EN 60947-5-2:2007 + A1:2012 IEC 60947-5-2:2007 + A1:2012
Standards	UL 60947-5-2: 2014 EN 62471:2008

Approvals and certificates

Protection class	II, rated voltage ≤ 250 V AC with pollution degree 1-2 according to IEC 60664-1 Caution! The protection class 2 is only valid when the terminal compartment is closed.
UL approval	E87056, cULus Listed Caution: This equipment is considered as open-type equipment. It must be mounted within an enclosure, that is suitably designed for protection against internal fire and personal injury resulting from accessibility to live parts according UL 508.
CCC approval	Certified by China Compulsory Certification (CCC)

Accessories**OMH-05**

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

OMH-07

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

OMH-21

Mounting bracket

OMH-22

Mounting bracket

OMH-MLV11-K

dove tail mounting clamp

OMH-RLK29

Mounting bracket

OMH-RLK29-HW

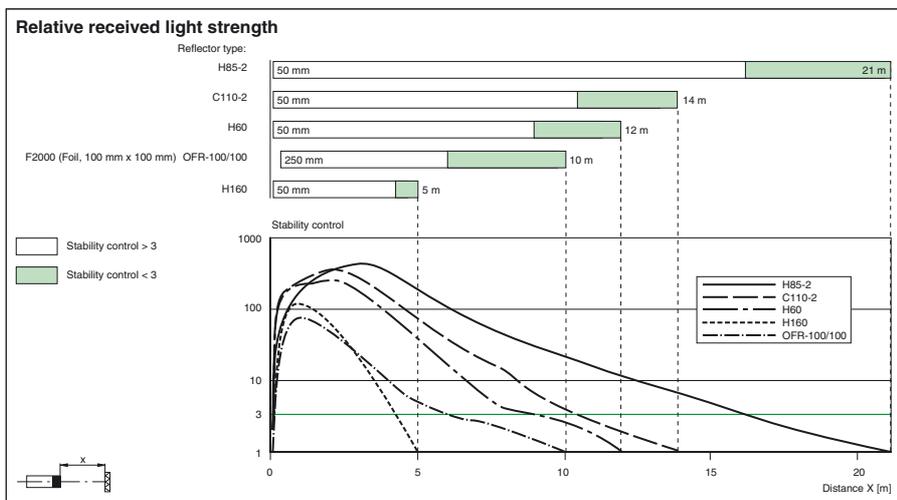
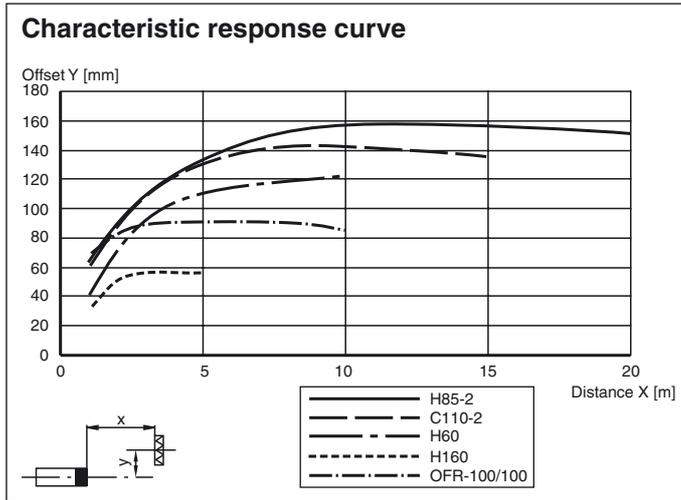
Mounting bracket for rear wall mounting

OMH-RL28-C

Weld slag cover model

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

Curves/Diagrams



Timer functions

Timer function	Switching type	Timing diagram	Receiver status
1 2 3 4 ON [] [] [] [] Without	Light	[Pulse]	Receiver exposed
1 2 3 4 ON [] [] [] [] ON delay	Light	[Pulse]	ON
1 2 3 4 ON [] [] [] [] OFF delay	Dark	[Pulse]	OFF
1 2 3 4 ON [] [] [] [] one shot	Light	[Pulse]	ON
1 2 3 4 ON [] [] [] [] one shot	Dark	[Pulse]	OFF

Time t_{ON} , t_{OFF} and t_{OS} are adjustable from 0.1 to 10 seconds.
 The Light-/Dark-Switch (Left, outer switch) is shown in the "Dark ON" position.

Type	Description	Notes
-Z	OFF delay timer	Adjustable time interval (0.1 s - 10 s)
	one shot timer	
	ON delay timer	
	ON delay timer / OFF delay timer	
	ON delay timer / one shot timer	

Release date: 2015-10-28 14:44 Date of issue: 2015-10-28 134130_eng.xml