



**Model Number**

**RLK28-55-Z/31/116**

Retroreflective sensor with terminal compartment

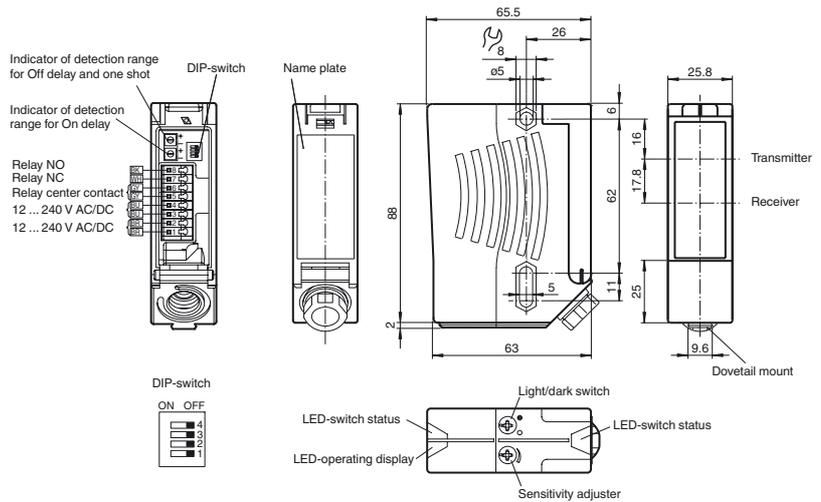
**Features**

- 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

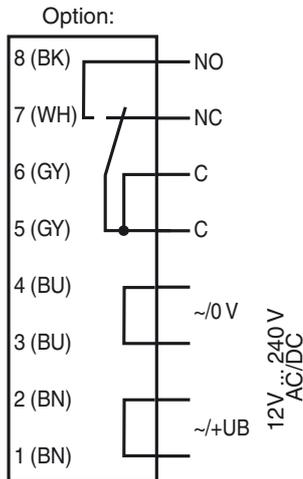
**Product information**

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).

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**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 <sub>d</sub>	600 a
Mission Time (T <sub>M</sub> )	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-on/dark-on changeover switch

**Electrical specifications**

Operating voltage	U <sub>B</sub>	12 ... 240 V AC/DC
Power consumption	P <sub>0</sub>	≤ 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	

**Conformity**

Product standard	EN 60947-5-2
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**Ambient conditions**

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

**Mechanical specifications**

Housing width	25.8 mm
Housing height	88 mm
Housing depth	65.5 mm
Degree of protection	IP67
Connection	terminal compartment with 8 spring-loaded terminals for wire cross section 0.5 ... 1.5 mm <sup>2</sup> , Insulation stripping 7.5 ... 8.5 mm , M16 x 1.5 cable gland
Material	
Housing	Plastic ABS
Optical face	Plastic pane
Mass	112 g

**Approvals and certificates**

EAC conformity	TR CU 020/2011 TR CU 004/2011
Protection class	II, rated insulation voltage ≤ 250 V AC with pollution degree 1-2 according to IEC 60664-1 Output circuit insulated from control circuit in accordance with IEC 61140. Caution! The protection class 2 is only valid when the terminal compartment is closed.
UL approval	E87056 , cULus Listed <b>Caution:</b> 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**

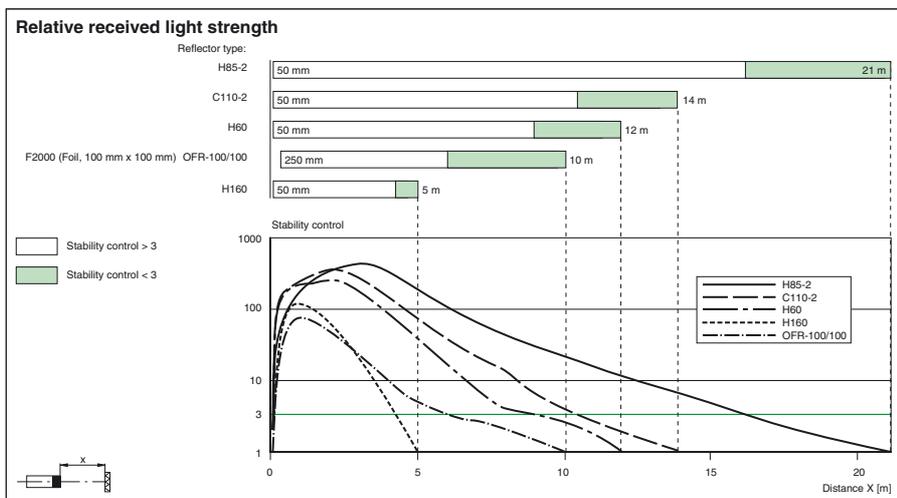
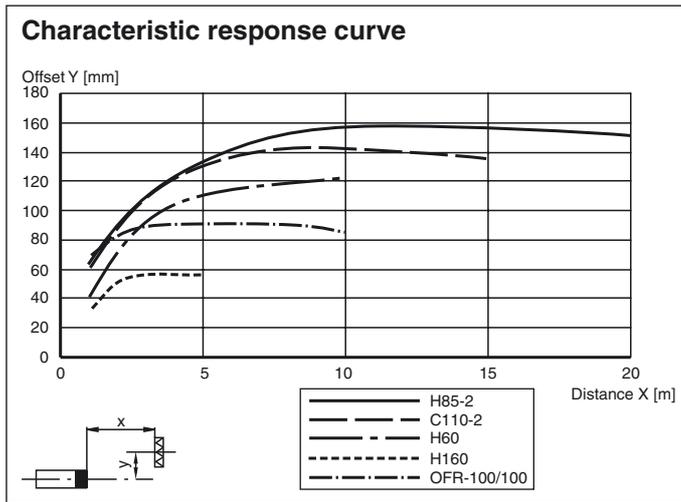
Mounting bracket for rear wall mounting

**OMH-RL28-C**

Weld slag cover model

Other suitable accessories can be found at [www.pepperl-fuchs.com](http://www.pepperl-fuchs.com)

Curves/Diagrams



Timer functions

Timer function	Switching type	Timing diagram	Receiver status
Without	Light Dark	[Timing diagram showing light pulses]	Receiver exposed Receiver dark
ON delay	Light Dark	[Timing diagram showing t <sub>ON</sub> delay]	ON OFF
OFF delay	Light Dark	[Timing diagram showing t <sub>OFF</sub> delay]	ON OFF
one shot	Light Dark	[Timing diagram showing t <sub>OS</sub> pulse]	ON 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	

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