



**Model Number**

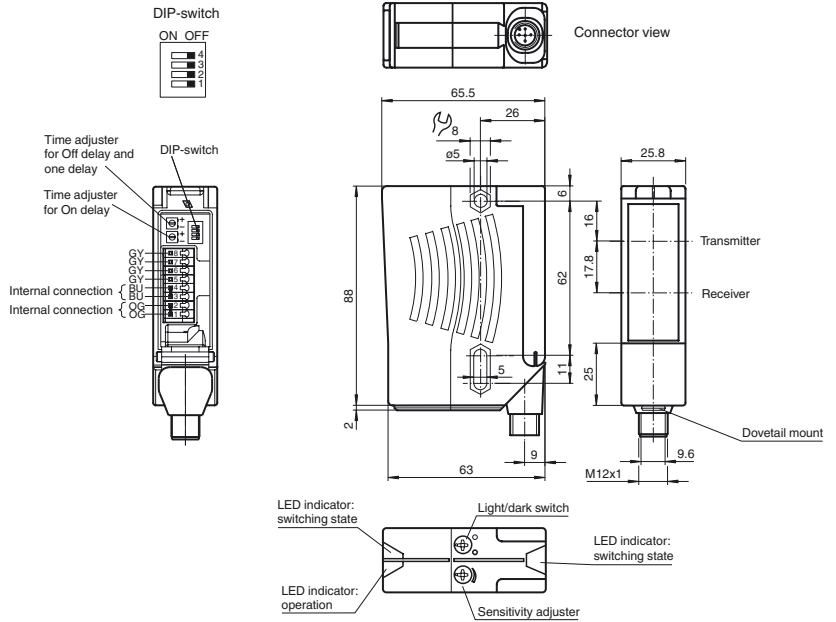
**RL28-55-Z/82b/110/112**

Retroreflective sensor  
with metal connector M12; 5-pin, 90°  
convertible

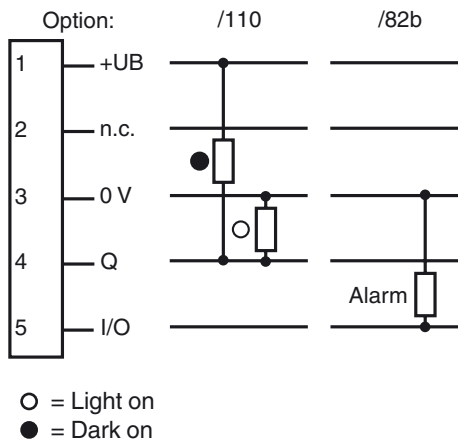
**Features**

- Ultra bright LEDs for power on, pre fault indication and switching state
- Programmable time function GAN, GAB, IAB and GAN-IAB as double function
- Not sensitive to ambient light, even with switched energy saving lamps
- Waterproof, protection degree IP67
- Protection class II

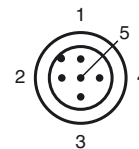
**Dimensions**



**Electrical connection**



**Pinout**



Release date: 2011-12-21 10:28 Date of issue: 2011-12-21 421133\_eng.xml

Subject to modifications without notice

Pepperl+Fuchs Group  
www.pepperl-fuchs.com

USA: +1 330 486 0001  
fa-info@us.pepperl-fuchs.com

Germany: +49 621 776-4411  
fa-info@pepperl-fuchs.com

Copyright Pepperl+Fuchs  
Singapore: +65 6779 9091  
fa-info@sg.pepperl-fuchs.com

**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 , 660 nm
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>	1140 a
Mission Time (T <sub>M</sub> )	20 a
Diagnostic Coverage (DC)	0 %

**Indicators/operating means**

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

**Electrical specifications**

Operating voltage	U <sub>B</sub>	10 ... 30 V DC
Ripple		10 %
No-load supply current	I <sub>0</sub>	40 mA

**Output**

Output of the pre-fault indication	1 PNP, inactive when falling short of the stability control for 10s; immediately inactive if 4 light beam interruptions take place	
Switching type	light/dark on, switchable . (selectable, light/dark switching is only activated if the receiver has 'dark on' selected.)	
Signal output	1 push-pull output, short-circuit protected, reverse polarity protected	
Switching voltage	max. 30 V DC	
Switching current	max. 100 mA	
Switching frequency	f	1000 Hz
Response time	0.5 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 0.02 s ... 1 s	

**Ambient conditions**

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

**Mechanical specifications**

Protection degree	IP67
Connection	5-pin, M12 x 1 connector, 90° rotatable
Material	
Housing	Plastic ABS
Optical face	plastic
Connector	metal
Mass	approx. 100 g

**Compliance with standards and directives**

Standard conformity	
Product standard	EN 60947-5-2:2007

**Approvals and certificates**

UL approval	cULus
CCC approval	Products with a maximum operating voltage of ≤36 V do not bear a CCC marking because they do not require approval.

**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**

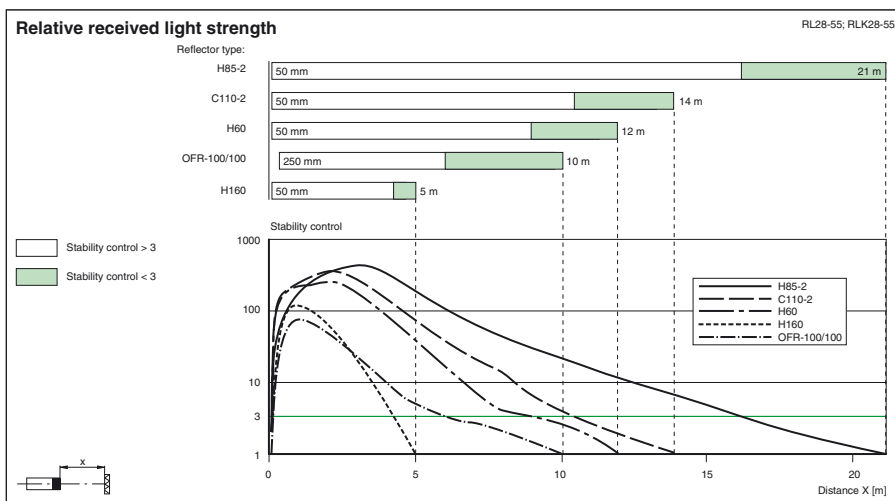
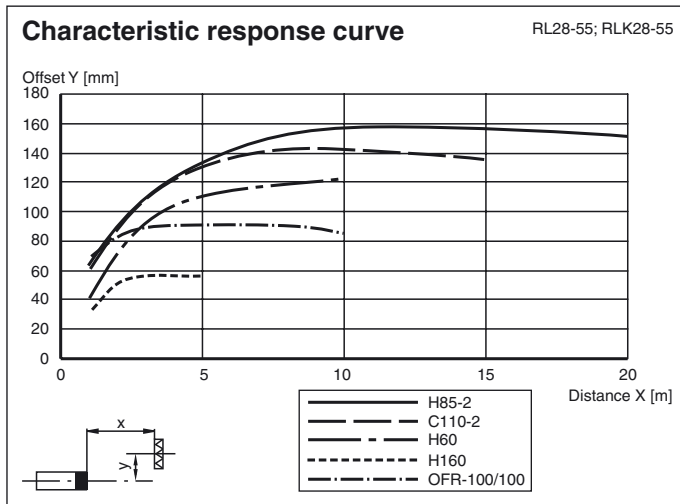
Mounting bracket for rear wall mounting

**OMH-RL28-C**

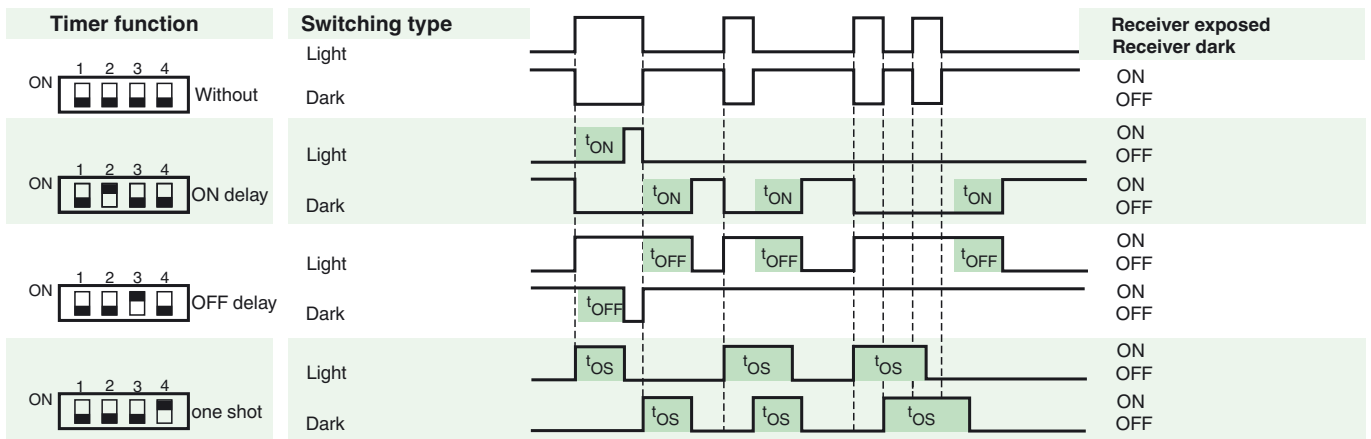
Protective cover

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

Curves/Diagrams



Timer functions



Time  $t_{ON}$ ,  $t_{OFF}$  and  $t_{OS}$  are adjustable from 0.02 to 1 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 (0.02 s - 10 s)
	one shot timer	
	ON delay timer	
	ON delay timer / OFF delay timer	
	ON delay timer / one shot timer	

Release date: 2011-12-21 10:28 Date of issue: 2011-12-21 421133\_eng.xml