Dimensions

DIP-switch

Indicator of detection range for GAB and IAB

Indicator of detection range for GAN

Relay NO
Relay NC
Relay center contact
12 ... 240 V AC/DC
12 ... 240 V AC/DC

DIP-switch

ON   OFF
4
3
2
1

Dovetail mount

Model Number

RLK28-FC-55-Z/31/116

Fire protection retro-reflective sensor
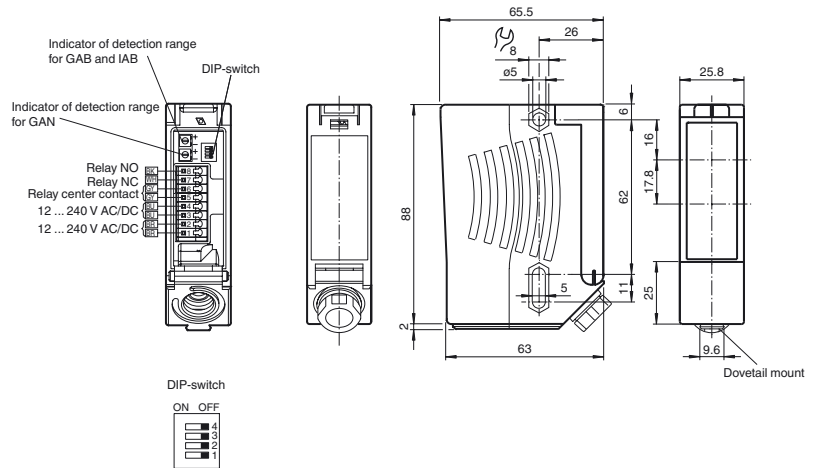with terminal compartment

Features

- Compact fire protection photoelectric sensor for safety devices on fire barriers

- Approval in accordance with VdS Test Report FSA and externally monitored manufacture (Ü Symbol)

- In the event of fire the smoke is disregarded, while persons in the smoke are detected

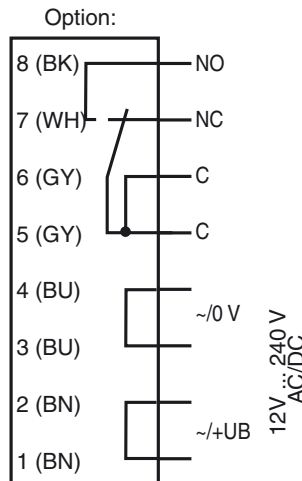- Not sensitive to ambient light, even with switched energy saving lamps

Product information

It is essential that fire is not allowed to spread in buildings should it break out. Fire protection regulations therefore prescribe fire barriers. These include fire doors, industrial fire doors and fire dampers, which are generally kept closed at all times. In areas where doors are left open, such as heavily traveled passageways and corridors, a self-closing mechanism must be automatically triggered in case of fire. However, the door must not close when persons or objects are in the closing area. Legislation consequently requires monitoring with appropriate safety devices. The technical challenge is to ignore the smoke and at the same time reliably detect people and objects in it. These certified photoelectric sensors fulfill this function.
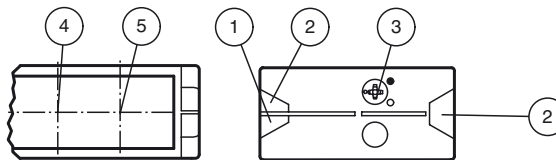
Electrical connection

Option:

8 (BK) — NO
7 (WH) — NC
6 (GY) — C
5 (GY) — C
4 (BU) — ~/0 V
3 (BU)
2 (BN) — ~/+UB
1 (BN)

12V ...240 V
AC/DC

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).

Indicators/operating means

1	Operating display	green
2	Schaltanzeige	yellow
3	Bright/dark switch	
4	Receiver	
5	Transmitter	

Subject to modifications without notice

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1

Technical data

General specifications

Effective detection range	1 ... 3 m
Reflector distance	1 ... 3 m
Threshold detection range	3 m
Reference target	reflector C110-2
Light source	LED
Light type	modulated visible red light , 660 nm
Tests	Verband der Sachversicherer e. V. report: FSA 07008
Diameter of the light spot	approx. 50 mm at a distance of 3 m
Angle of divergence	emitter 1.2° receiver 2°
Ambient light limit	80000 Lux
Accessories provided	reflector C110-2 Bracket

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	Time adjuster , Light/Dark switch

Electrical specifications

Operating voltage	U_B	12 ... 240 V AC/DC
Power consumption	P_0	≤ 3.5 VA

Output

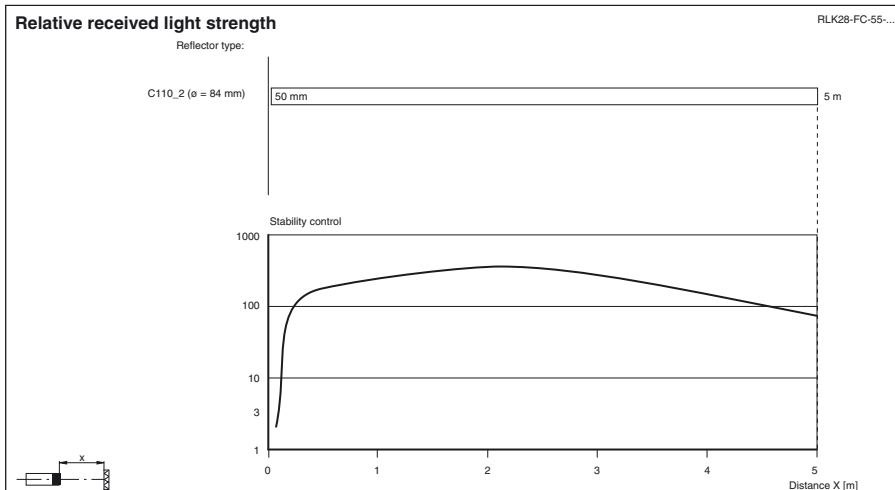|		
Switching type		light/dark on, switchable (selectable, light/dark switching is only activated if the receiver has 'dark on' selected.)
Signal output		Relay, 1 alternator
Switching voltage		max. 250 V AC/DC
Switching current		max. 2 A
Switching frequency	f	25 Hz
Response time		20 ms
Timer function		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

Protection degree	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

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.
CCC approval	Certified by China Compulsory Certification (CCC)

Relative received light strength

RLK28-FC-55-...

Reflector type:

C110_2 (ø = 84 mm)   50 mm   5 m

Functional principle

Typical applications

- Protection of barriers that can be walked through, such as fire doors, industrial fire doors and fire dampers
- Protection of barriers in the vicinity of track-based conveyor systems
- Reliable detection of people and objects for hold-open systems on fire barriers, even in smoky conditions

Detection area

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

REF-C110-2
Reflector, round ø 84 mm, central mounting hole

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

Fire protection photoelectric sensors are photoelectric sensor systems as safety devices for hold-open systems on fire barriers. The safety device is used to monitor the closing area of fire barriers for obstacles. The safety device ensures that the barrier is only closed if there are no obstacles in the closing area.
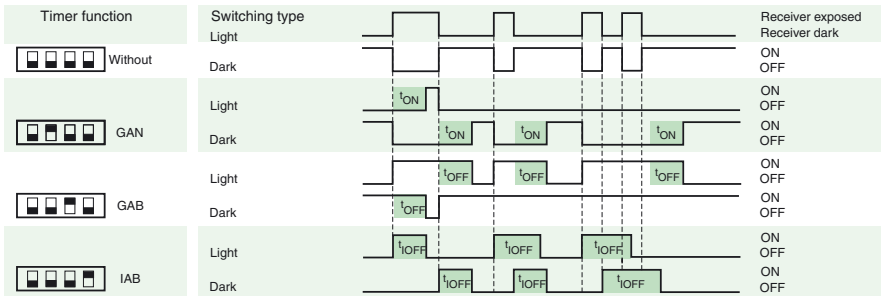
The RLK28-55-FC is a diffuse-mode photoelectric sensor with a polarization filter and power supply for 12 - 240 V AC/DC. The diffuse-mode photoelectric sensor is an emitter and a receiver in a single housing. The emitted light is reflected back to the receiver by a reflector. When the light beam is interrupted, the switching function is triggered.

With its relatively high excess gain at detection ranges of up to 3 m, the diffuse-mode photoelectric sensor is suitable as a safety device for hold-open devices on fire barriers. The photoelectric sensor is insensitive to reflective and shiny objects.

In accordance with the FSA test report, this photoelectric sensor can only be operated with the C110-2 reflector in an operating range (reflector distance) of 1 - 3 m.

Setting the timer functions:

The desired timer function can be set with the DIP switches

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

Version	Description	Notes
-Z	"OFF delay" time relay, (GAB)	Time range adjustable 0.1 s - 10 s
	Impulse-type "OFF delay" time relay, (IAB)	
	"ON delay" time relay, (GAN)	
	"ON/OFF delay" double time relay (GAN/GAB)	
	"ON impulse-type/OFF delay" double time relay (GAN/IAB)	

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