Dimensions

Print
Type code
Connection diagram

54.3
14.8
8
ø5
6
88
62
16
17.8
25.8
Transmitter
Receiver
5
11
9.8
25
2
7
Dovetail mount
approx. 48
10
23.5
8
ø24.5
51.8
X

View X without angle junction box

LED indicator: switching state
LED indicator: operation
Sensitivity adjuster
Light/dark switch
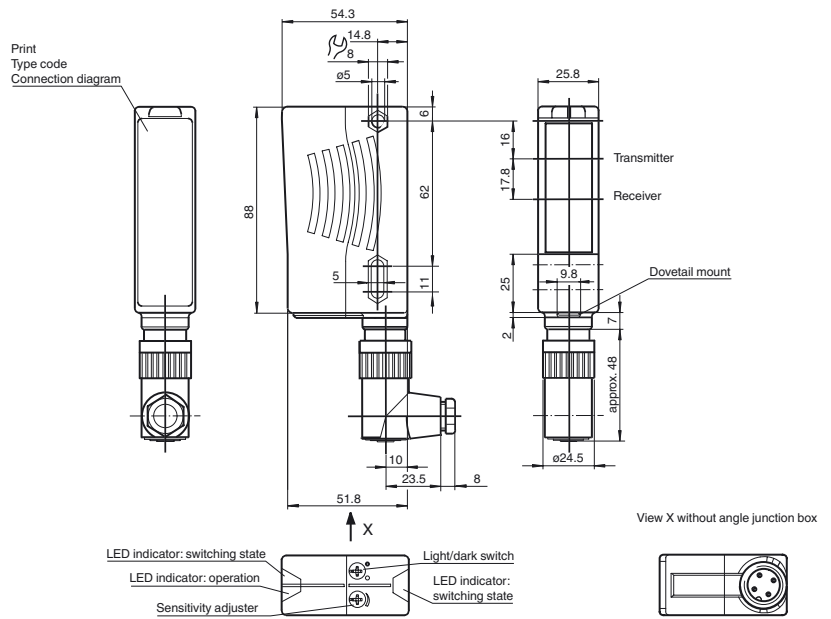LED indicator: switching state

Model Number

RL28-55-V/49/74

Retroreflective sensor
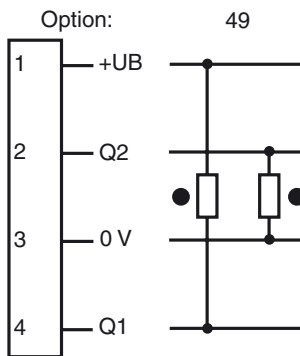with 4-pin, M18 x 1 plastic connector

Features

- Foreground suppression, suited to recording of sheet-shrink-wrapped objects
- Ultra bright LEDs for power on, weak signal indication and switching state
- Not sensitive to ambient light, even with switched energy saving lamps
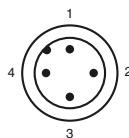- Waterproof, degree of protection IP67
- Protection class II

Electrical connection

Option: 49

1 +UB
2 Q2
3 0 V
4 Q1

○ = Light on
● = Dark on

Pinout

1
4   2
3

Refer to "General Notes Relating to Pepperl+Fuchs Product Information".
Pepperl+Fuchs Group   USA: +1 330 486 0001   Germany: +49 621 776 4411   Singapore: +65 6779 9091   **PEPPERL+FUCHS**   **1**
www.pepperl-fuchs.com   fa-info@us.pepperl-fuchs.com   fa-info@de.pepperl-fuchs.com   fa-info@sg.pepperl-fuchs.com   *SENSING YOUR NEEDS*

Technical data

General specifications

Effective detection range	0 ... 13 m
Reflector distance	0.5 ... 13 m (blind range 0 ... 0.2 m faded out)
Threshold detection range	17 m
Reference target	H85-2 reflector
Light source	LED
Light type	modulated visible red light , 660 nm
Polarization filter	yes
Diameter of the light spot	approx. 220 mm at a distance of 13 m
Angle of divergence	emitter 1.2° receiver 2°
Ambient light limit	80000 Lux

Functional safety related parameters

$MTTF_d$	690 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-on/dark-on changeover switch

Electrical specifications

Operating voltage	U_B	10 ... 30 V DC
Ripple		10 %
No-load supply current	I_0	≤ 40 mA

Output

Switching type		light/dark on switchable
Signal output		1 NPN, 1 PNP synchronized-switching, short-circuit protected, reverse polarity protected , open collectors
Switching voltage		max. 30 V DC
Switching current		max. 200 mA
Switching frequency	f	1000 Hz
Response time		0.5 ms

Conformity

Product standard	EN 60947-5-2

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	54.3 mm
Degree of protection	IP67
Connection	connector M18, 4-pin
Material	
Housing	Plastic ABS
Optical face	plastic
Connector	plastic
Mass	70 g

Approvals and certificates

Protection class	II, rated voltage ≤ 250 V AC with pollution degree 1-2 according to IEC 60664-1
UL approval	E87056 , cULus Listed , class 2 power supply , type rating 1

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-HW
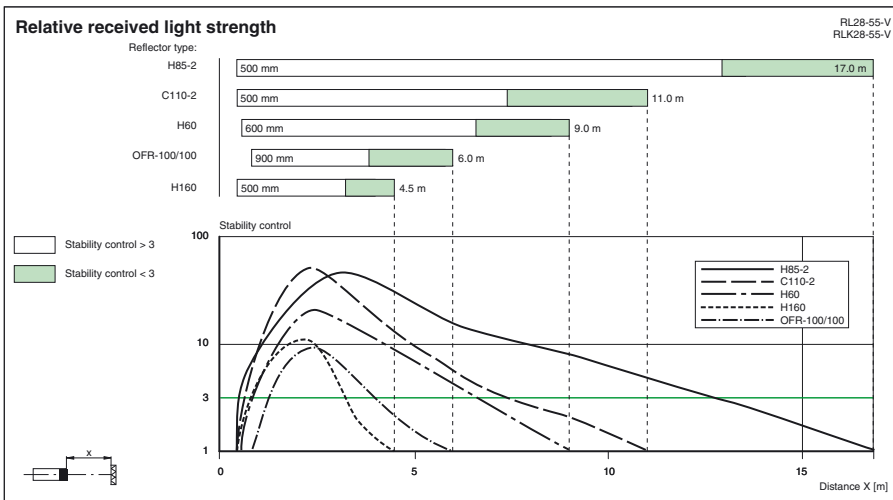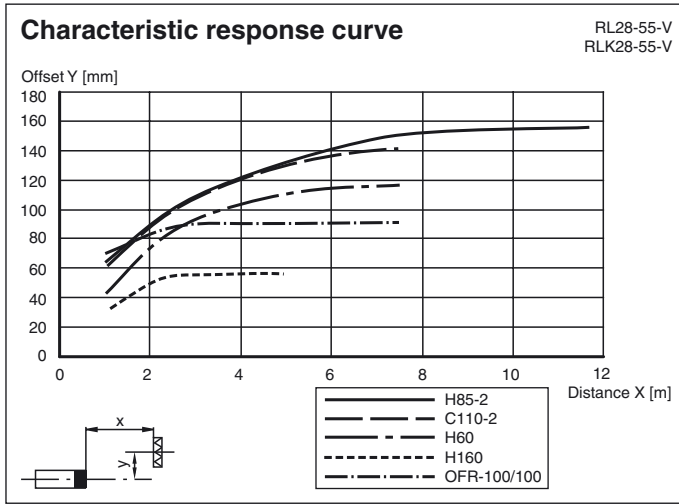Mounting bracket for rear wall mounting

OMH-RL28-C
Weld slag cover model

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

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Curves/Diagrams

Characteristic response curve

RL28-55-V
RLK28-55-V

Offset Y [mm]

Legend:
- H85-2
- C110-2
- H60
- H160
- OFR-100/100

Distance X [m]

Relative received light strength

RL28-55-V
RLK28-55-V

Reflector type:

Reflector type		
H85-2	500 mm	17.0 m
C110-2	500 mm	11.0 m
H60	600 mm	9.0 m
OFR-100/100	900 mm	6.0 m
H160	500 mm	4.5 m

Stability control

□ Stability control > 3
▨ Stability control < 3

Legend:
- H85-2
- C110-2
- H60
- H160
- OFR-100/100

Distance X [m]

Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

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