Model Number
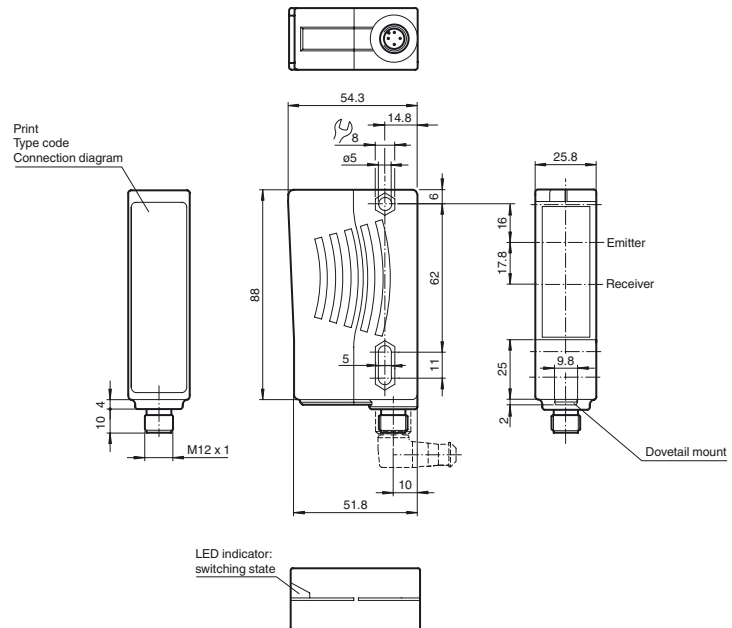
RL29-55-V/25/73c/136

Retroreflective sensor
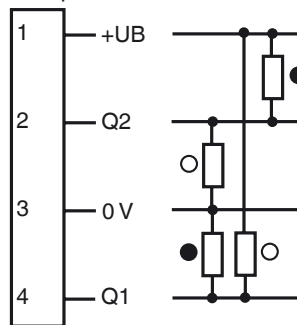
with 4-pin, M12 x 1 plastic connector

Features

- Foreground suppression, suited to recording of sheet-shrink-wrapped objects
- Highly visible LED
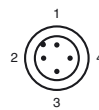- Powerful push-pull output
- Optimal price/power ratio

Dimensions

Print
Type code
Connection diagram

M12 x 1

Emitter

Receiver

Dovetail mount

LED indicator:
switching state

Electrical connection

Option:

1	+UB
2	Q2
3	0 V
4	Q1

○ = Light on
● = Dark on

Pinout

Wire colors in accordance with EN 60947-5-2

1	BN	(brown)
2	WH	(white)
3	BU	(blue)
4	BK	(black)

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
www.pepperl-fuchs.com　　fa-info@us.pepperl-fuchs.com　fa-info@de.pepperl-fuchs.com　fa-info@sg.pepperl-fuchs.com

PEPPERL+FUCHS
SENSING YOUR NEEDS

1

Technical data

General specifications

Effective detection range	0.4 ... 6 m
Threshold detection range	8 m
Reference target	H85 reflector
Light source	LED, 660 nm
Light type	modulated visible red light
Polarization filter	yes
Diameter of the light spot	approx. 130 mm at a distance of 6 m
Angle of divergence	Emitter: 1.2 ° , Receiver: 2 °
Ambient light limit	80000 Lux

Functional safety related parameters

$MTTF_d$	1982.2 a
Mission Time (T_M)	20 a
Diagnostic Coverage (DC)	0 %

Indicators/operating means

Function indicator	LED yellow, light with free light beam , flashes when falling short of the stability control

Electrical specifications

Operating voltage	U_B	10 ... 30 V DC , class 2
Ripple		10 %
No-load supply current	I_0	≤ 30 mA

Output

Switching type		light on
Signal output		2 push-pull (4 in 1) outputs, short-circuit protected, reverse polarity protected
Switching voltage		max. 30 V DC
Switching current		max. 100 mA
Switching frequency	f	500 Hz
Response time		1 ms

Ambient conditions

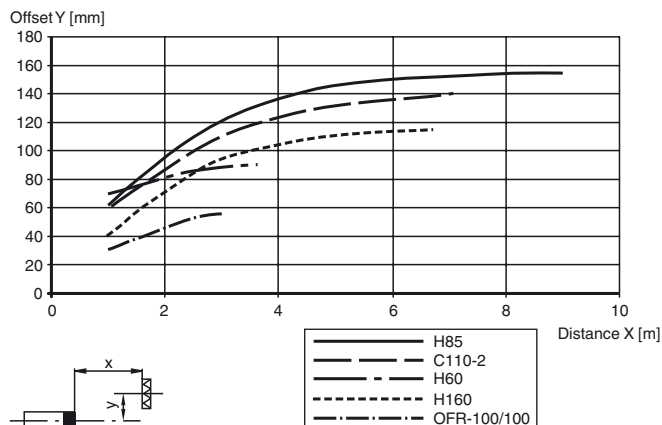|	
Ambient temperature	-25 ... 60 °C (-13 ... 140 °F)
Storage temperature	-40 ... 75 °C (-40 ... 167 °F)

Mechanical specifications

Housing width	25.8 mm
Housing height	88 mm
Housing depth	54.3 mm
Degree of protection	IP65
Connection	Plastic connector M12 x 1, 4-pin
Material	
Housing	Plastic ABS
Optical face	plastic
Mass	70 g

Compliance with standards and directives

Directive conformity	
EMC Directive 2004/108/EC	EN 60947-5-2:2007

Approvals and certificates

UL approval	cULus Listed, Class 2 Power Source, Type 1 enclosure
CCC approval	CCC approval / marking not required for products rated ≤36 V
Approvals	CE, cULus Listed 57M3 (Only in association with UL Class 2 power supply; Type 1 enclosure)

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

V1-G-2M-PUR
Female cordset, M12, 4-pin, PUR cable

V1-W-2M-PUR
Female cordset, M12, 4-pin, PUR cable

Suitable reflectors and cable sockets can be found in the Internet

Curves/Diagrams

Characteristic response curve

Offset Y [mm] vs Distance X [m]

Curves: H85, C110-2, H60, H160, OFR-100/100

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

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@de.pepperl-fuchs.com

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

PEPPERL+FUCHS
SENSING YOUR NEEDS

Excess Gain vs. Sensing Range

RL29-55-V

Reflector type:

H85	400 mm	8.0 m
C110-2	400 mm	7.1 m
H60	400 mm	6.0 m
OFR-100/100	400 mm	3.1 m
H160	400 mm	2.8 m

☐ Stability control > 1.5

▨ Stability control < 1.5

Excess Gain

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

Distance X [m]

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

PEPPERL+FUCHS
SENSING YOUR NEEDS