



Background suppression sensor MLV41-8-HV-60-IR/110/124/167

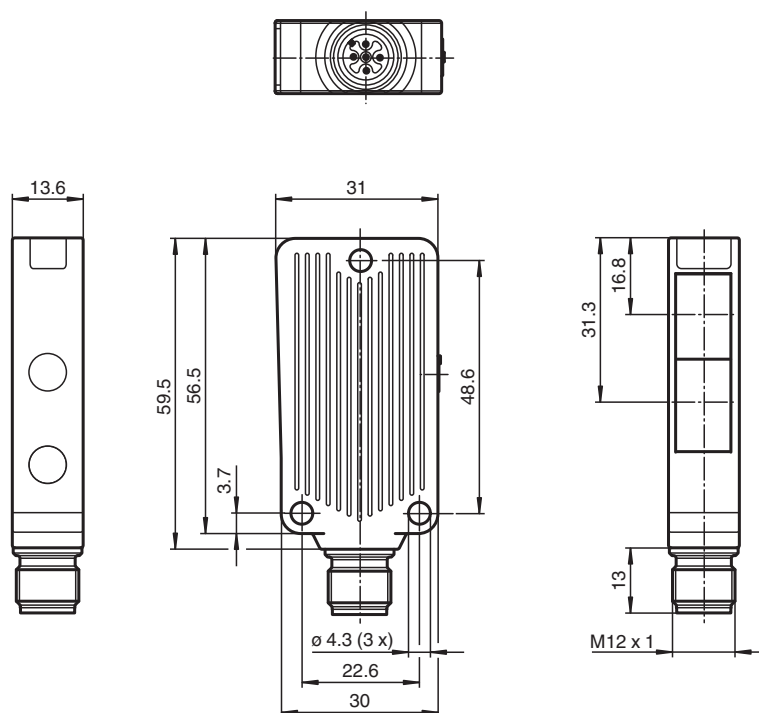


- Special device for paper web break control and printing machinery
- Active contamination detection
- Sensing range 20 mm ... 60 mm
- Light scanner with foreground suppression 0 mm ... 15 mm and background suppression beyond 70 mm
- Minimal black-white difference
- Sturdy aluminum housing
- Degree of protection IP67

Robust diffuse mode sensor for monitoring web breaks, compact housing design, foreground and background suppression, 60 mm detection range, infrared light, push-pull output, weak signal output, M12 plug



Dimensions



Technical Data

General specifications

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 1111
fa-info@de.pepperl-fuchs.com

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

PEPPERL+FUCHS

Technical Data

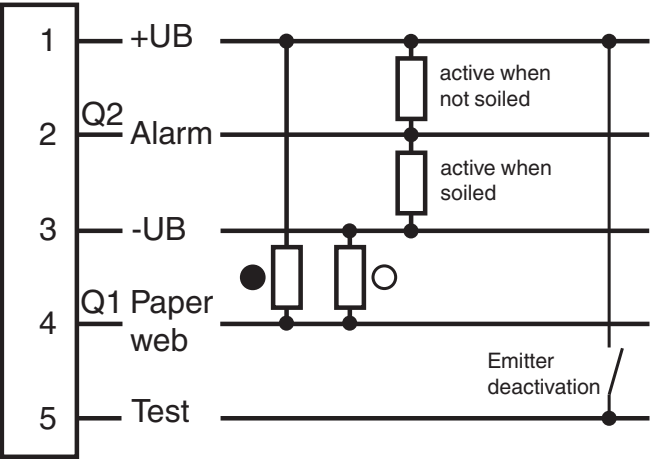
Foreground suppression		0 ... 15 mm
Detection range		on black (6 %): 20 ... 60 mm fixed
Detection range min.		20 ... 60 mm
Detection range max.		16 ... 70 mm
Background suppression		starts from 70 mm
Light source		IREd
Light type		modulated infrared light , 880 nm
Polarization filter		no
Black-white difference (6 %/90 %)		< 1 % at 60 mm
Diameter of the light spot		max. 6 mm at a distance of 70 mm
Opening angle		approx. 4 °
Ambient light limit		50000 Lux
Functional safety related parameters		
MTTF _d		1260 a
Mission Time (T _M)		20 a
Diagnostic Coverage (DC)		0 %
Indicators/operating means		
Operation indicator		LED green, statically lit Power on, short-circuit or low voltage : pulsing (1 Hz). Pollution : flashing (1 Hz)
Function indicator		2 LEDs yellow ON: object inside the scanning range OFF: object outside the scanning range
Electrical specifications		
Operating voltage	U _B	10 ... 30 V DC
Ripple		10 %
No-load supply current	I ₀	max. 25 mA
Input		
Test input		emitter deactivation at +U _B
Output		
Stability alarm output		1 push-pull (4 in 1) output, short-circuit protected, reverse polarity protected
Signal output		1 push-pull (4 in 1) output, short-circuit protected, reverse polarity protected
Switching voltage		max. 30 V DC
Switching current		max. 100 mA
Voltage drop	U _d	≤ 2.5 V DC
Switching frequency	f	250 Hz
Response time		2 ms
Conformity		
Product standard		EN 60947-5-2
Approvals and certificates		
Protection class		II, rated voltage ≤ 50 V AC with pollution degree 1-2 according to IEC 60664-1 , functional insulation acc. to DIN EN 50178
UL approval		cULus Listed 57M3 (Only in association with UL Class 2 power supply; Type 1 enclosure)
CCC approval		CCC approval / marking not required for products rated ≤36 V
Ambient conditions		
Ambient temperature		0 ... 70 °C (32 ... 158 °F)
Storage temperature		-40 ... 75 °C (-40 ... 167 °F)
Mechanical specifications		
Housing width		31 mm
Housing height		56.5 mm
Housing depth		13.6 mm
Degree of protection		IP67
Connection		5-pin, M12 x 1 connector
Material		
Housing		Aluminum , Delta-Seal coated

Release date: 2023-03-28 Date of issue: 2023-03-28 Filename: 224265_eng.pdf

Technical Data

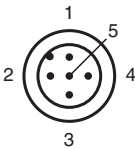
Optical face	glass pane	
Connector		metal
Mass	50 g	

Connection Assignment



○ = Light on
● = Dark on

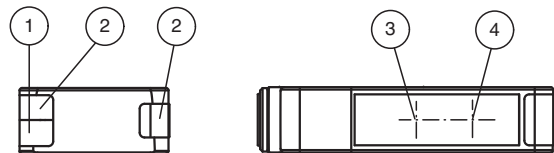
Connection Assignment



Wire colors in accordance with EN 60947-5-2

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

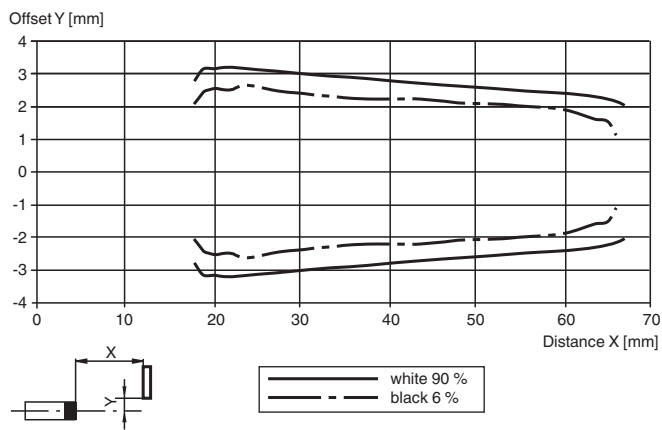
Assembly



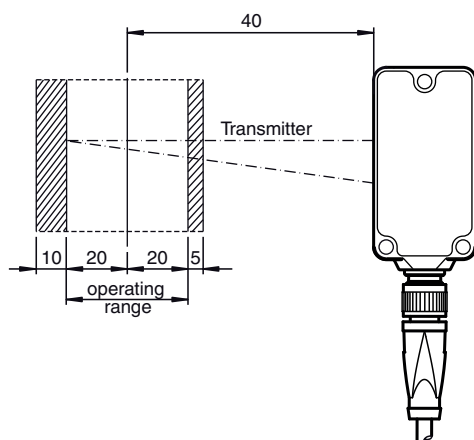
1	Operating display	green
2	Signal display	yellow
4	Receiver	
5	Emitter	

Characteristic Curve

Characteristic response curve

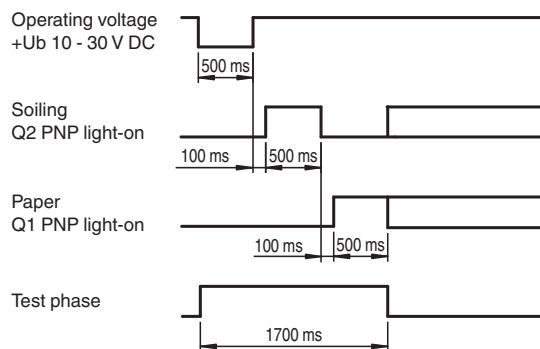


Path of light beam



Diffuse mode sensor test

The test monitors the operation of the sensor outputs after switching on the power supply.
It does not monitor the “optical channels” of the light curtain.



Accessories

	OMH-MLV41-8-HV-L	Mounting bracket
	OMH-MLV41-8-HV-U	Mounting bracket
	OMH-40	Mounting bracket

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 1111
fa-info@de.pepperl-fuchs.com

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

 **PEPPERL+FUCHS**

Accessories

	OMH-09	Mounting bracket for Sensors series MLV41 for M12 rod mounting
---	---------------	--

Release date: 2023-03-28 Date of issue: 2023-03-28 Filename: 224265_eng.pdf