

Diffuse mode sensor

RLK31-8-2500-IR/31/115b-Y8271

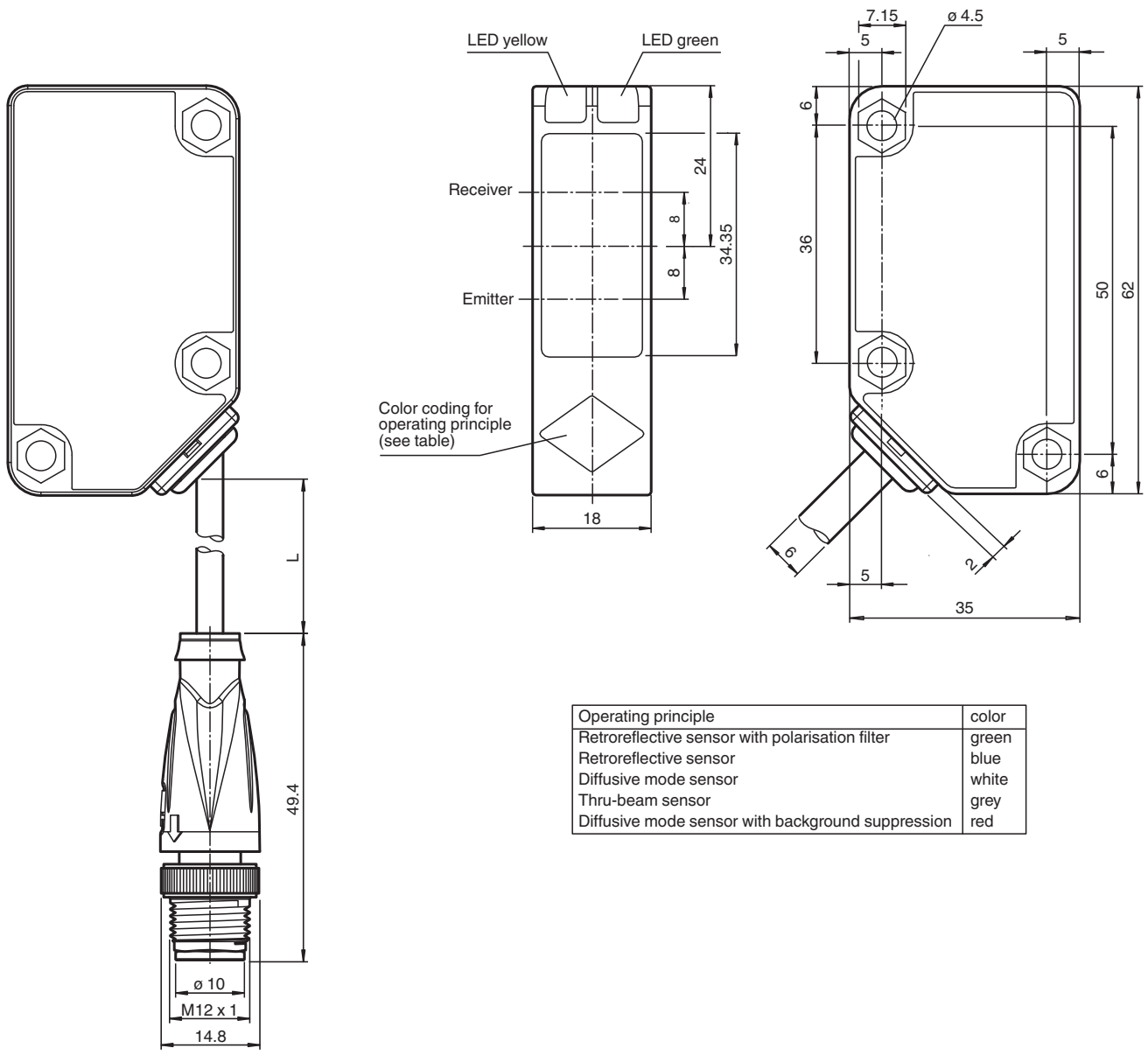


- Highly visible LED
- Relay output
- Version with relay's Common terminal tied to +UB
- Compact and stable housing

Diffuse mode sensor, plastic housing, 2500 mm adjustable detection range, DC version, infrared light, light on, relay contact output, fixed cable with M12 plug

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Dimensions



Operating principle	color
Retroreflective sensor with polarisation filter	green
Retroreflective sensor	blue
Diffusive mode sensor	white
Thru-beam sensor	grey
Diffusive mode sensor with background suppression	red

Technical Data

General specifications	
Detection range	0 ... 2500 mm adjustable
Reference target	standard white 200 mm x 200 mm
Light source	IRED
Light type	modulated infrared light , 850 nm
Polarization filter	no
Diameter of the light spot	approx. 50 mm at a distance of 2.5 m
Opening angle	2 °

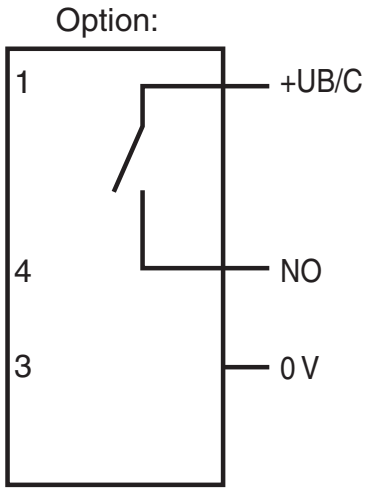
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Technical Data

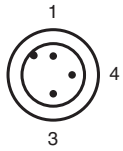
Ambient light limit		50000 Lux ; according to EN 60947-5-2
Functional safety related parameters		
$MTTF_d$		790 a
Mission Time (T_M)		20 a
Diagnostic Coverage (DC)		0 %
Indicators/operating means		
Operation indicator		LED green: power on
Function indicator		LED yellow, lights up with receiver lit
Control elements		Sensing range adjuster
Electrical specifications		
Operating voltage	U_B	12 ... 30 V DC
No-load supply current	I_0	≤ 40 mA
Power consumption	P_0	≤ 1.2 VA
Output		
Switching type		light-on
Signal output		relay, 1 NO
Switching voltage		12 ... 30 V DC
Switching current		max. 3 A
Switching power		DC: max. 90 W
Switching frequency	f	≤ 20 Hz
Response time		≤ 25 ms
Conformity		
Product standard		EN 60947-5-2
Ambient conditions		
Ambient temperature		-25 ... 55 °C (-13 ... 131 °F)
Storage temperature		-40 ... 70 °C (-40 ... 158 °F)
Mechanical specifications		
Degree of protection		IP67
Connection		fixed cable with M12 x 1 , 4-pin connector
Material		
Housing		Polycarbonate
Optical face		PMMA
Cable		
Length	L	150 mm
Mass		65 g
Dimensions		
Height		62 mm
Width		18 mm
Depth		35 mm

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Connection



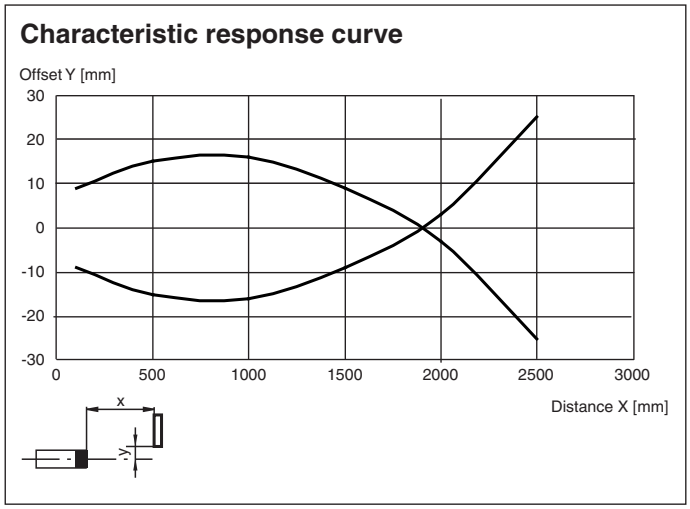
Connection Assignment



Wire colors in accordance with EN 60947-5-2

1	|	BN	(brown)
3	|	BU	(blue)
4	|	BK	(black)

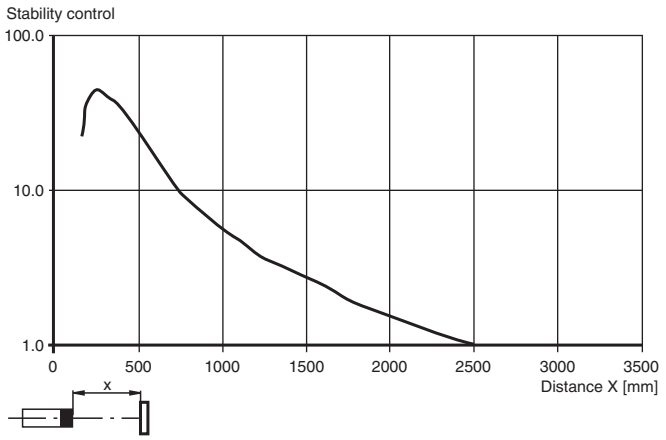
Characteristic Curve



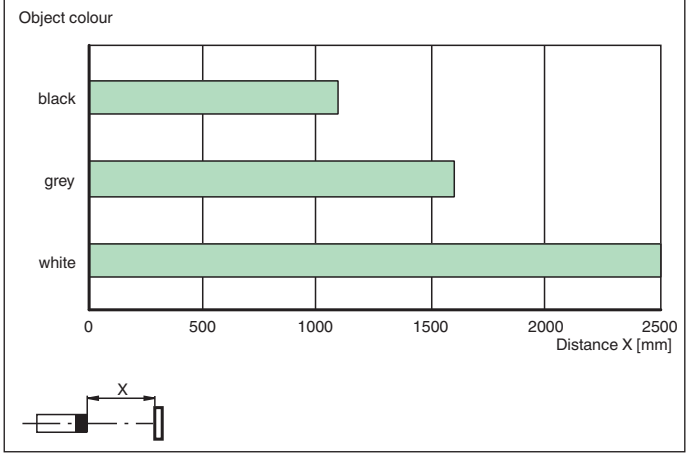
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Characteristic Curve

Relative received light strength



Detection ranges



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