Reflection light beam switch with polarisation filter

RL39-54/32/40a/82a/116

with terminal compartment

CE



- Detection range up to 9 m
- Glare protected with polarisation filter
- Visible red light
- Pre-fault indication and output
- Light/dark ON, switchable
- Supplied with reflector and mounting accessory
- Protection degree IP67

Date of edition 08/01/03

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General specifications	
Effective detection range	0 ... 7 m
Reflector distance	100 ... 9000 mm
Threshold detection range	9 m
Light source	LED
Approvals	CE
Reference target	H85 reflector
Light type	red, alternating light
Ambient light limit	10000 Lux
Indicators/operating means	
Function display	LED yellow: switching state LED red: pre-fault indication
Operating elements	sensitivity adjuster
Operating elements	Light/dark switch
Electrical specifications	
Operating voltage	10 ... 30 V DC
Ripple	10 %
No-load supply current I_0	Ω35 mA
Time delay before availability t_v	Ω50 ms
Output	
Output of the pre-fault indication	NO, static, pnp (&Ω200 mA)
Switching type	light/dark switching
Signal output	1 switch output pnp
Switching voltage	max. 30 V DC
Switching current	max. 200 mA
Voltage drop U_d	Ω3 V
Switching frequency f	Ω300 Hz
Response time	Ω1,5 ms
Standard conformity	
Standards	EN 60947-5-2
Ambient conditions	
Ambient temperature	-25 ... 55 °C (248 ... 328 K)
Storage temperature	-40 ... 55 °C (233 ... 328 K)
Mechanical specifications	
Protection degree	IP67
Connection	terminal compartment PG9, Ω2.5 mm^2
Material	
Housing	PBT
Optical face	PMMA
Mass	100 g

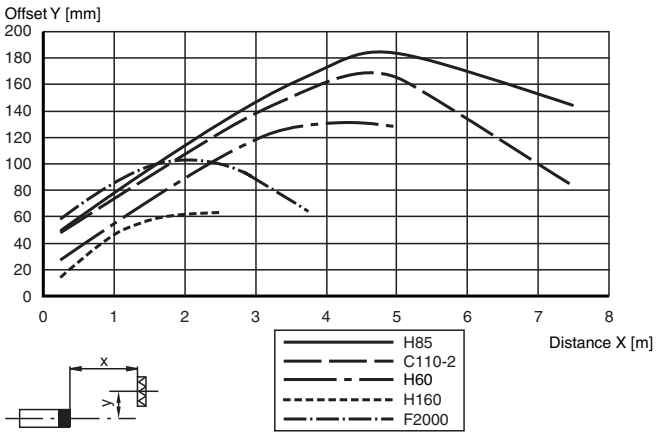
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Curves/Diagrams

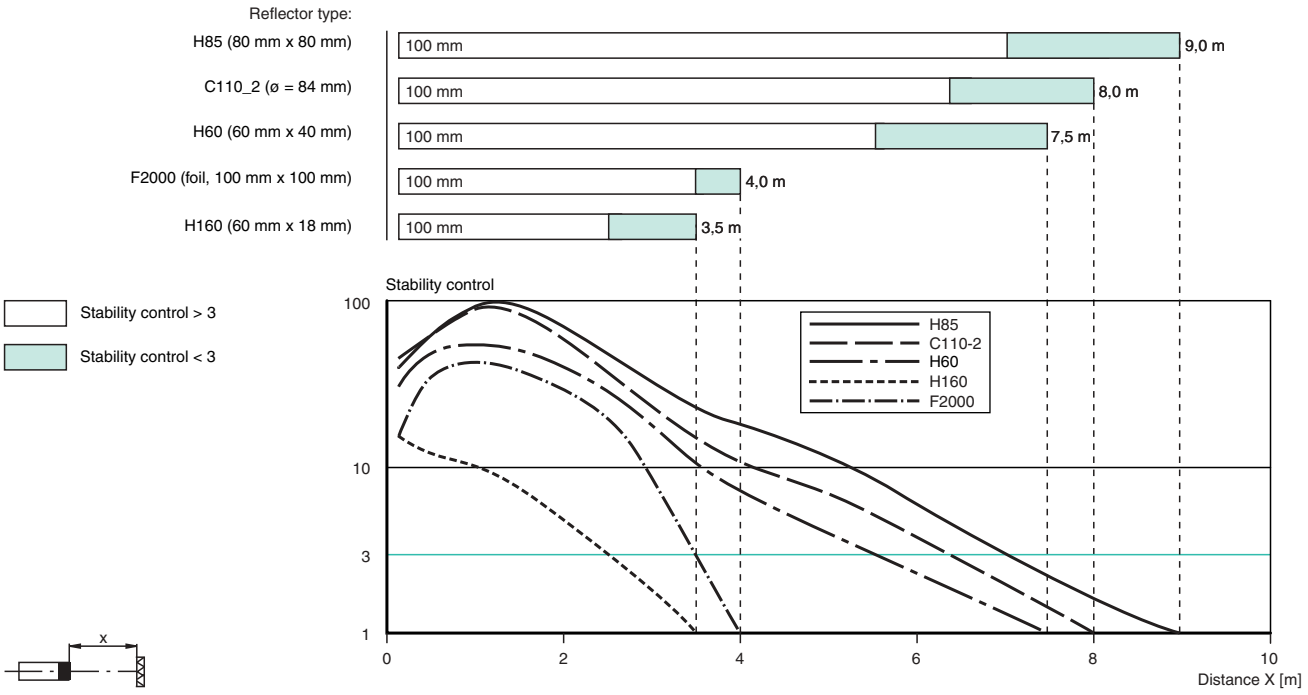
Characteristic response curve

RL39-54



Relative received light strength

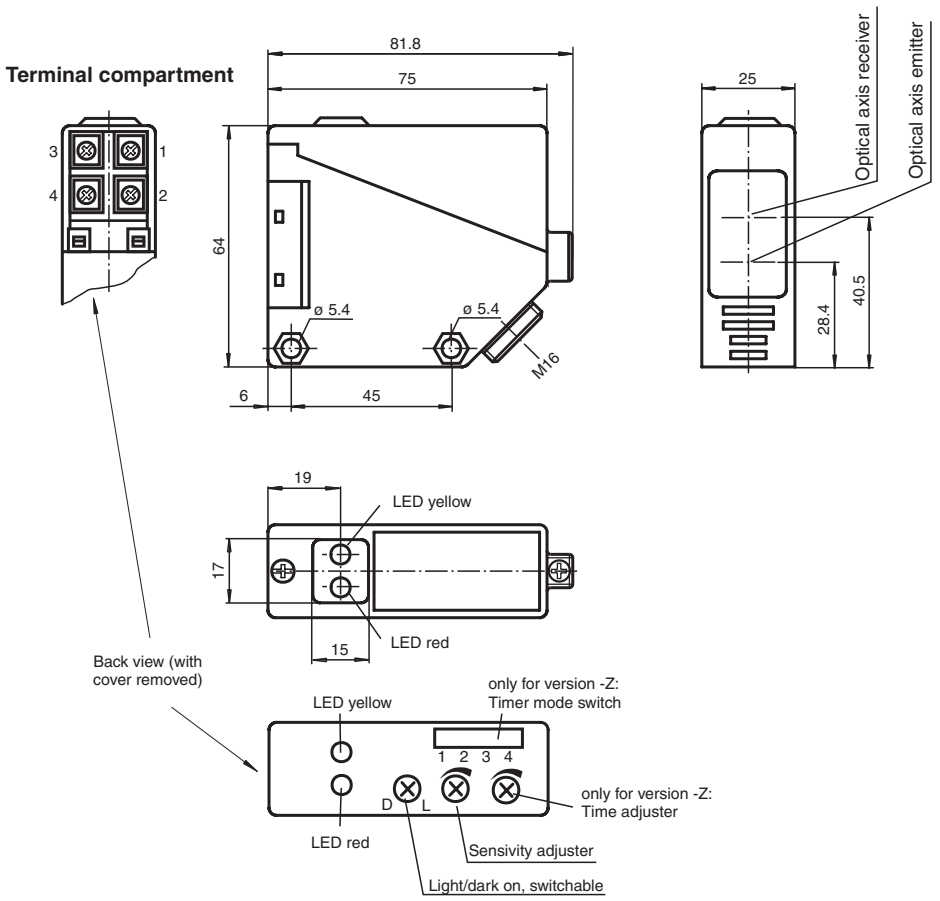
RL39-54



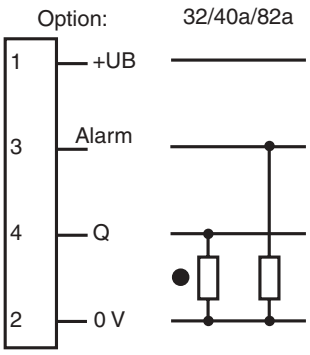
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Dimensions



Electrical connection



m = light on, l = dark on

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Additional Information

Conventional use:

The reflex light beam switch contains the emitter and receiver in a single housing. The light from transmitter is beamed back from a reflector to the receiver. If an object interrupts the light beam the switching function is initiated.

Mounting instructions:

The sensor can be fastened over the through-holes directly or with the included mounting bracket.
The base surface must be flat to avoid distorting the housing during mounting. It is advisable to secure the bolts and screws with washers to prevent misalignment of the sensor.

Instructions for adjustment:

Connect the sensor to operating voltage, the LED green lights up constantly.
Mount suitable reflector opposite light beam switch and align roughly.
The exact adjustment takes by swivelling the sensor horizontally and vertically. With optimum light reception the yellow LED lights up constantly. In case of bad alignment, the red LED lights up.

Object detection check:

Move the object into the light beam. If the object is recorded, the yellow LED goes off. If it isn't going off, reduce the sensitivity with the potentiometer until it goes off. It should light up constantly again when the object is removed.
The red LED lights up if reception deteriorates (e.g. soiled lenses or by maladjustment) and when falling short of the stability control.

Iustration:

We recommend that you clean the optical interfaces and check the plug-in connections and screw connections at regular intervals.

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