

**RETRO-REFLEX POLARISED AXIAL SENSOR**

**BA 946 S**

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- Sensing distance  
On reflector  $\varnothing$  46 : 1m  
On reflector  $\varnothing$  84 : 2m
- Supply : 10 / 30 VDC
- Output : PNP / NPN
- On-delay or off-delay timer standard



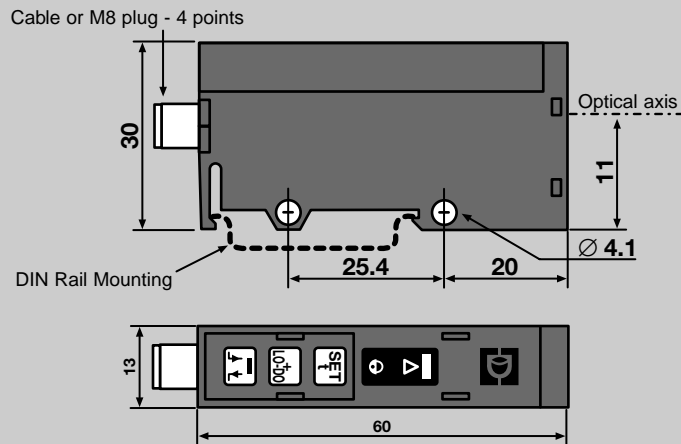
**Description :**

- Insensitivity to reflections interferences
- Simple and quick set-up for self-teach (standard and sensitive mode)
- Adjustable timer
- Alignment indicator
- Dirty optics indicator
- Keyboard lock
- Remote input for self-teach (sensitive mode)
- Direct or inverse output
- Output : PNP / NPN
- Cable or M8 plug
- Polycarbonate strong casing

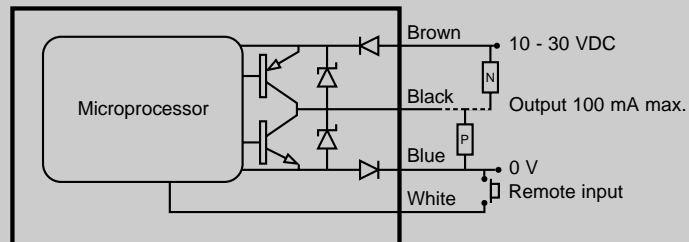
**Applications :**

- Position or presence control of parts on conditioning machine.
- Through-beam on a conveyor.
- Detection of shiny parts.

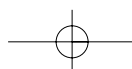
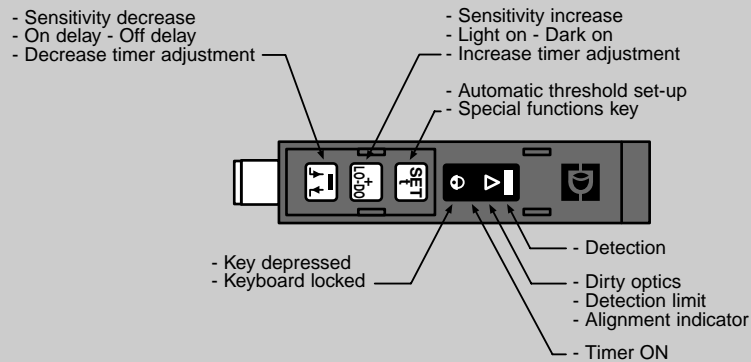
**Dimensions**



**Wiring Connections**



**Visualisation and Keyboard**





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Technical Information

Supply	voltage	10 / 30 VDC ripple < 10% within specified limits
	consumption	< 40 mA
Response time	t <sub>on</sub> or t <sub>off</sub>	< 500 μs
	switching frequency	< 1 KHz
Output	max. nominal intensity	100 mA
	residual voltage at 100 mA	< 2 V
	residual voltage at 10 mA	< 1 V
Emission	LED	red
	modulation frequency	8 KHz
Timer	range	0 to 5 s with 11 increments
	increment duration	first increment : 40 ms, following increments : 500 ms
Temperature	operating	0 to 60 °C
	storage	-20 to 80 °C
External light immunity	incandescent light	10 000 lux
	sunlight	20 000 lux
Protections	supply	inverse polarity protection
	output	permanent short-circuit or over-load protection
	degree of protection	IP 65
Remote input	on	voltage < 1,4 V
	off	voltage > 3 V

This product is UL listed if powered by a class II power supply or a 30 VDC max. insulated power supply (e.g. insulated transformer) protected by a 3A max UL listed fuse

Programming Function



LEARNING CONDITIONS :

Align the reflector.

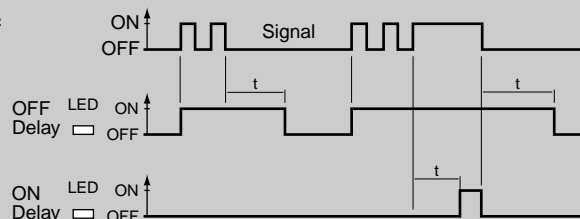
- 1) In standard mode, set the object.
- 2) In sensitive mode, remove the object.

SELF-TEACH OPERATION	SENSITIVITY ADJUSTMENT	LIGHT ON DARK ON	TIMING FUNCTIONS	ALIGNMENT
<p>Standard mode</p> <p> 1 time</p> <p>or</p> <p>Sensitive mode</p> <p> 2 times</p>	<p>To increase</p> <p> N times</p> <p>To decrease</p> <p> N times</p> <p>Step by step action</p>	<p></p> <p>Keep up 4 seconds</p> <p>The output function is inverted</p> <p>Indicator <input type="checkbox"/> does not change</p>	<p> 4 seconds :  flashes</p> <p> N times, T  } t ON</p> <p> N times, T  } t ON</p> <p> 4 sec. : switch ON delay OFF delay</p> <p> Reset Timer. t OFF</p> <p> 4 seconds End of timing set up</p>	<p> 4 seconds</p> <p> flashes at 3 different frequencies proportional to the signal</p> <p> 4 seconds</p> <p>End of the alignment</p>

Keyboard lock : & 4 sec., switches on

Keyboard unlock : & 4 sec., switches off

TIMER CHART



Document non contractuel, Edition 10/05



- CE following directives 89 / 336 / CEE and 92 / 31 / CEE (see DINEL for test conditions)
- This product should not be used in applications that would endanger individuals. Any change of label is strictly forbidden.

