

LC 2001 (1 colour) - LC 2004 (4 colours)

- Choose between 7 sensing fibres:
 - Fibre tips from $\varnothing 1,8$ to $\varnothing 18$ mm
 - Sensing distance from 2 to 60 mm
- Supply: 24 VDC
- Outputs: PNP / NPN
- Response time: 1 ms or 20 ms according to the mode



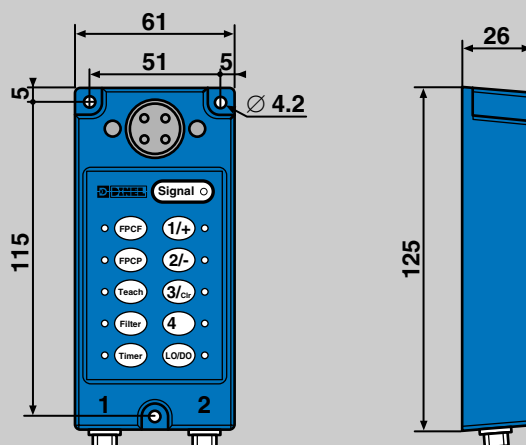
Description:

- Detection of one to four recorded colours
- Fibres : see next page
- Simple and quick set-up for self-teach (large, standard or thin discrimination)
- External input for self-teach (channel 1)
- Adjustable timer
- Direct or inverse output
- Keyboard lock
- Outputs: PNP / NPN
- M12 plug
- Polycarbonate strong housing

Applications:

- Detection of little marks and colored tags.
- Quality control:
 - lids colour.
 - presence of labels.
- Detection of coloured wires.
- Detection of translucent colored parts.
- Sorting out of colored parts.

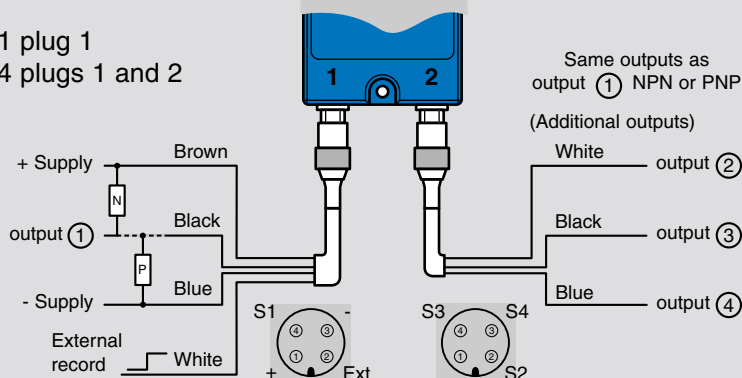
Dimensions



Wiring Connections

LC 1001 plug 1

LC 1004 plugs 1 and 2



Visualisation and Keyboard

Program selection for FPCF and FPCP fibres:



Discrimination selection: thin, standard, large :



Recording of the colour(s) on output 1, 2, 3 or 4 :



Timer st-up:



Filter set-up:



Direct / inverse selection:



A LED indicates the state of the functions for each programming button.

Technical Information

Supply	voltage	24 VDC $\pm 10\%$ ripple < 10% within specified limits
	consumption	120 mA
Response time	t_{on} or t_{off}	1 ms (FPCF mode) - 20 ms (FPCP mode)
	switching frequency	500 Hz (FPCF mode) - 25 Hz (FPCP mode)
Outputs	max. nominal intensity	100 mA per output
	residual voltage at 100 mA	< 2,2 V
	residual voltage at 10 mA	< 0,5 V at low level
Emission	LED	red, green, blue
Timer	range	0 to 5 s
	increment duration	first increment : 50 ms, following increments : 250 ms
Temperature	operating	0 to 40 °C
	storage	-20 to 60 °C
External light immunity	incandescent light	3 000 lux
	sunlight	5 000 lux
Protections	supply	inverse polarity protection
	output	permanent short-circuit or over-load protection
	degree of protection	IP 65
Remote input	on	4 to 24 V, 10 μ s minimum
	off	< 1 V
Recording	duration	1 s

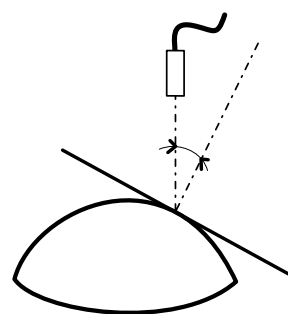
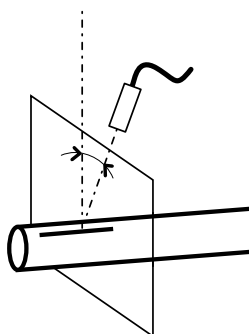
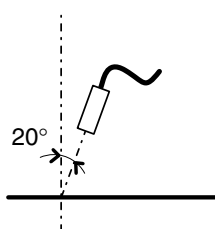
To Place Order

Product	Colour sensor	Colour sensor fibre
Reference	LC 2001 - 1 output LC 2004 - 4 outputs M12 cable 2m included	see following page

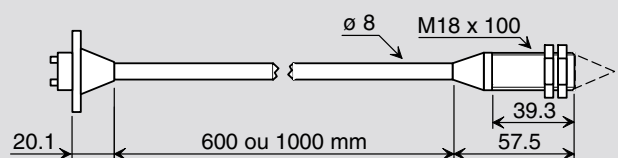
COLOUR SENSOR FIBRE (FPC)

Installation of the fibre :

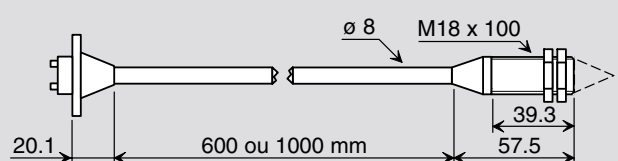
- Conform to the recommended distances.
- If the surface is shiny, tilt the axis of the fibre tip around 20° perpendicular to the surface..
- Insert the fibre connector on the side before the sensor (respecting the right polariser) and tighten the two M4 screws.



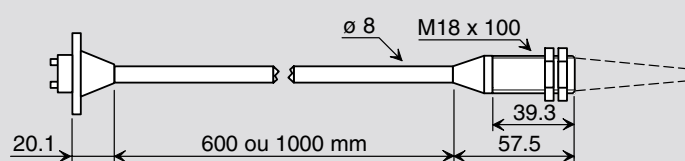
Reflective Mode



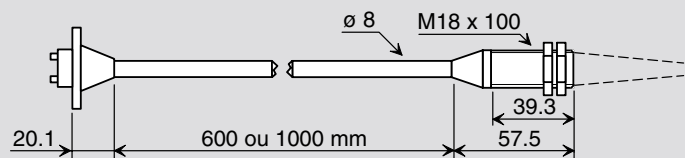
Application: Thin reading at focalised point ϕ 1.5



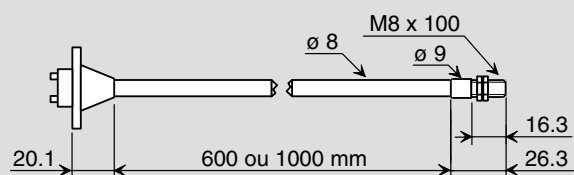
Application: Reading at focalised point ϕ 1.5 for moving fibre



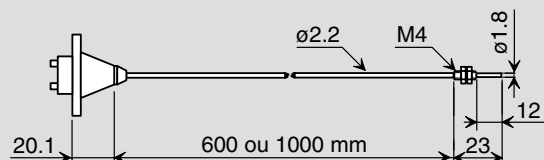
Application: Thin reading with variable distance (spot around ϕ 6)



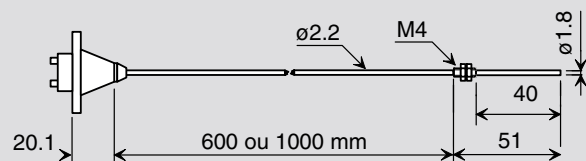
Application: Reading with variable distance for moving fibre (spot around ϕ 6)



Application: Thin reading with reduced obstruction (spot ϕ 1,5)



Application: Thin reading with very weak obstruction (spot ϕ 2 to 3)



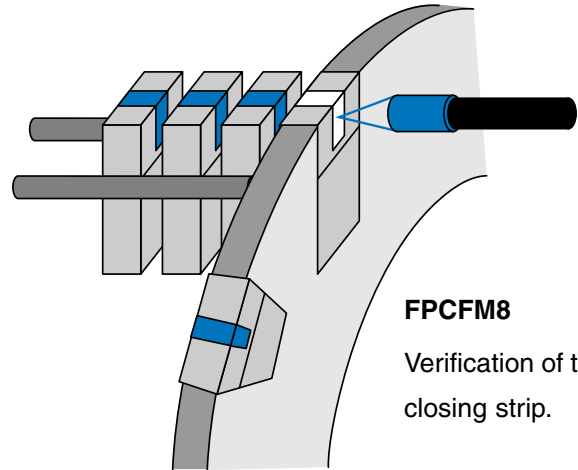
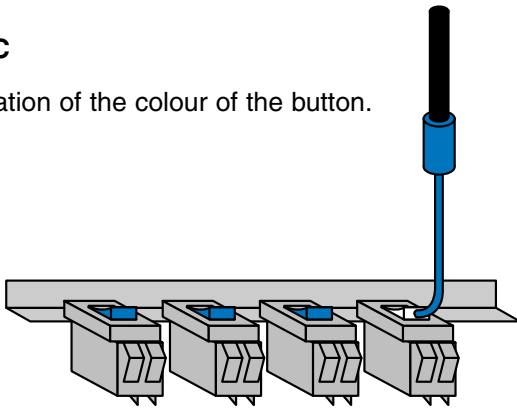
Application: Thin reading with very weak obstruction, extension conformable (spot ϕ 2 to 3)

REFERENCES	LENGTH (MM)	SENSING DISTANCE (MM)	MODE / TR
FPCF 61 FPCF 101	600 1000	18	FPCF / 1 ms
FPUCF 61 FPUCF 101	600 1000	18	FPCF / 1 ms
FPCP 61 FPCP 101	600 1000	40 to 60	FPCP / 20 ms
FPUCP 61 FPUCP 101	600 1000	40 to 60	FPCP / 20 ms
FPCFM8 61 FPCFM8 101	600 1000	4 to 6	FPCF / 1 ms
FPCFA 61 FPCFA 101	600 1000	2 to 4	FPCF / 1 ms
FPCFC 61 FPCFC 101	600 1000	2 to 4	FPCF / 1 ms

TYPES OF APPLICATIONS

FPCFC

Verification of the colour of the button.

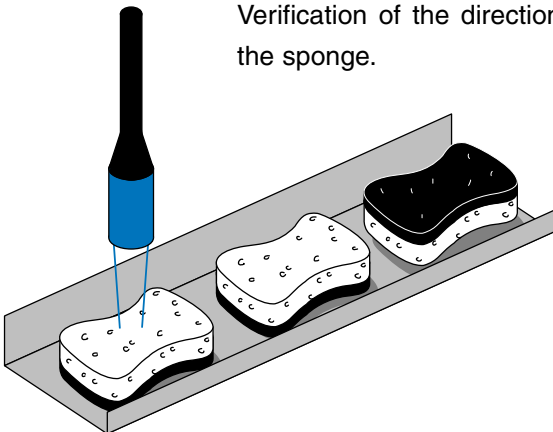


FPCFM8

Verification of the closing strip.

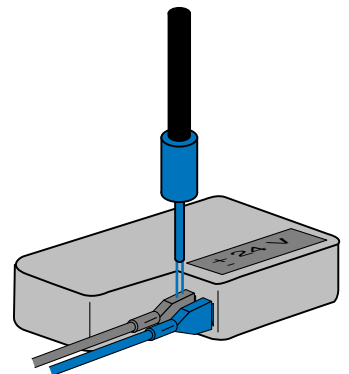
FPCP

Verification of the direction of the sponge.



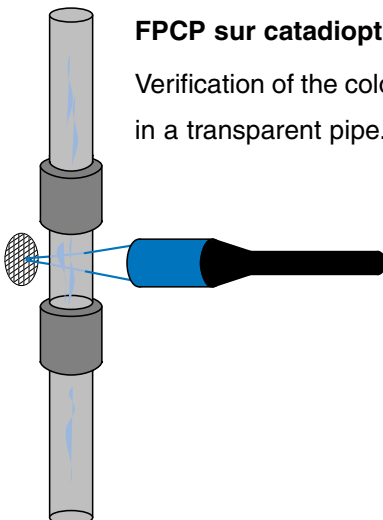
FPCFA

Polariser +/-.



FPCP sur catadioptr

Verification of the colour of a liquid in a transparent pipe.



4 x FPCFC

Verification of the colour of conductors.

