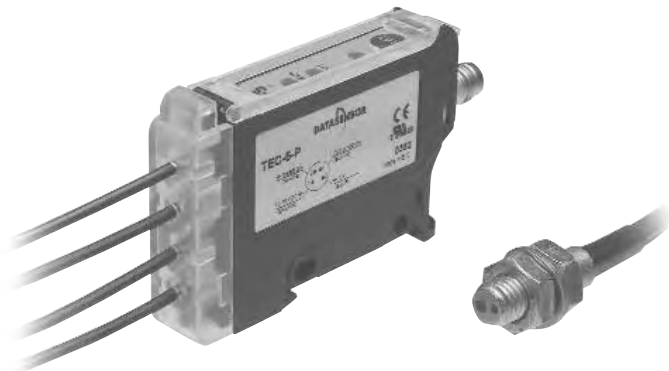
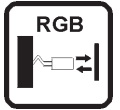


## FIBRE-OPTIC COLOUR SENSORS



- *Detection of one single colour or chromatic range*
- *Microprocessor-based teach-in setting*
- *Patent-covered CLEARLOCK™ fibre fixing system*
- *M8 connection*

## TEC SERIES

The fibre-optic sensors of the **TEC** series offer a versatile and effective solution for the detection of objects, surfaces, register marks, or other references on the basis of their colour.


The diffused proximity optic system is based on a RGB (red-green-blue) LED emission; the received signal is elaborated and recognised by the microprocessor that also controls the output with a response time inferior to 1 ms.

The sensors can recognise a precise colour, or various colours inside a chromatic range included between two references memorised during the setting phase. The output is activated every time the colour or memorised chromatic range is recognised.

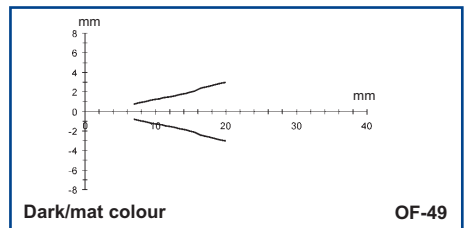
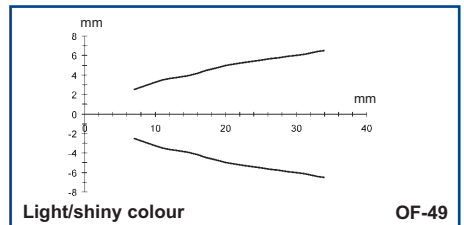
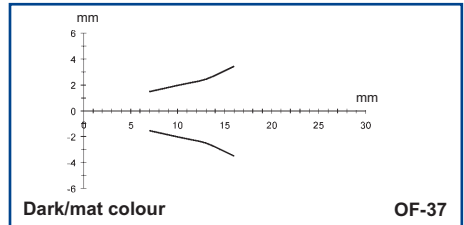
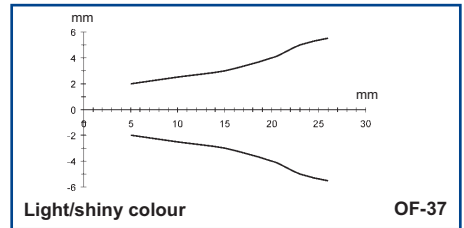
Three patent-covered solutions are present: the RGB emission control and the amplifier's thermic compensation guaranteeing the maximum sensitivity in detection; the transparent *CLEARLOCK™* system allows the verification of the correct insertion and fixing of the fibre-optics, as well as the identification of the light sources.



## TECHNICAL DATA

<b>Power supply:</b> .....	10 ... 30 Vdc, reverse polarity protection
<b>Consumption:</b> .....	60 mA max.
<b>Light emission:</b> .....	red 660 nm, blue 470 nm, green 525 nm LED
<b>Resolution:</b> .....	2 mm at 10 mm
<b>Diffuse proximity operating distance:</b> .....	5 ... 25 mm on light/shiny colour (OF-37) 7 ... 17 mm on dark/mat colour (OF-37) 7 ... 34 mm on light/shiny colour (OF-49) 7 ... 20 mm on dark/mat colour (OF-49)
<b>Depth of field:</b> .....	10 mm min.
<b>Setting:</b> .....	SET push-button
<b>Indicators:</b> .....	yellow OUTPUT LED green TIMER LED green/red bi-colour SET/ERROR LED
<b>Output type:</b> .....	PNP, open collector
<b>Saturation voltage:</b> .....	2 V max.
<b>Output current:</b> .....	100 mA max., short-circuit protection
<b>Response time:</b> .....	0.9 ms max.
<b>Switching frequency:</b> .....	550 Hz max.
<b>Timing function:</b> .....	40 ms minimum output ON
<b>Operating mode:</b> .....	output active during colour detection
<b>Connection:</b> .....	M8 4-pole connector
<b>Electrical protection:</b> .....	class 2
<b>Mechanical protection:</b> .....	IP65
<b>Housing material:</b> .....	polycarbonate
<b>Weight:</b> .....	30 g max.
<b>Operating temperature:</b> .....	-10 ... +55°C
<b>Storage temperature:</b> .....	-20 ... +70°C
<b>Reference standard:</b> .....	EN 60947-5-2
<b>Certifications:</b> .....	CE  US LISTED
<b>OF-37 / OF-49 fibre-optic data:</b> .....	fibre in PMMA with PET sheath, operating temperature: -40 ... +60°C

## DETECTION DIAGRAMS



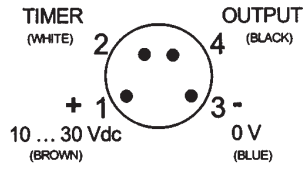
The operating distances indicate the detection distance with excess gain 2.

The detection diagrams indicate the typical operating distance with excess gain 1.

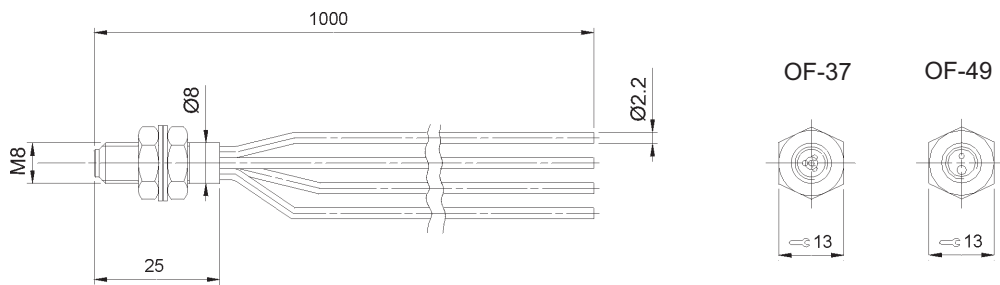
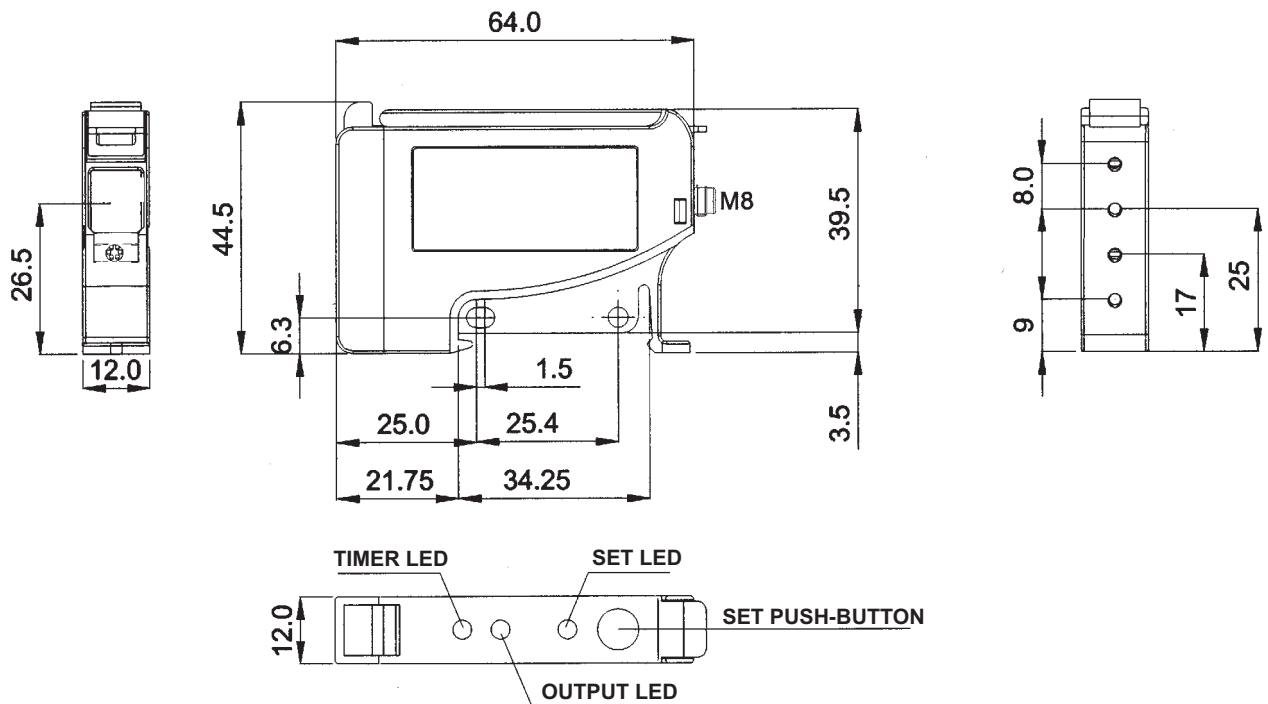


## CONNECTIONS

### M8 CONNECTOR



## DIMENSIONS



mm



## MODEL SELECTION AND ORDER INFORMATION

MODEL	CONNECTION	OUTPUT	CODE N°
TEC-6-P	M8 connector	PNP	950501130

\* Fibre-optic has to be ordered separately

## ACCESSORY SELECTION AND ORDER INFORMATION

MODEL	DESCRIPTION	CODE N°
ST-505	1 pc 'L' shaped fixing bracket	95ACC1300
CRD-5000	1 pc DIN rail fixing bracket	95ACC1290
OF-37-10	diffused proximity fibre-optic	95A201050
OF-49-10	high resolution fibre-optic	95A201360
AF-11	fibre-cutting tool	95ACC1260

Please refer also to the M8 connectors of the **CS** series

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COLOUR SENSORS

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