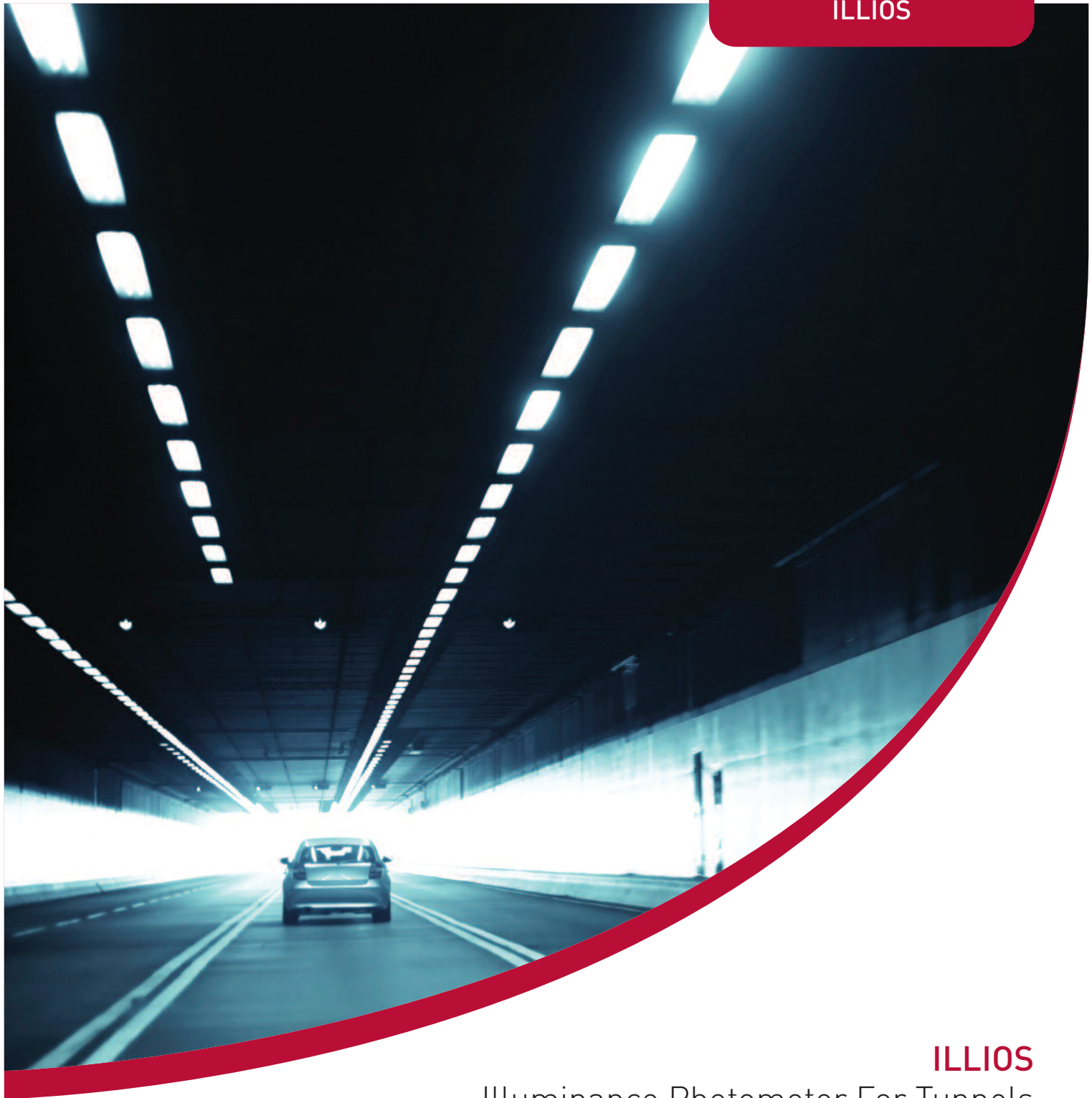
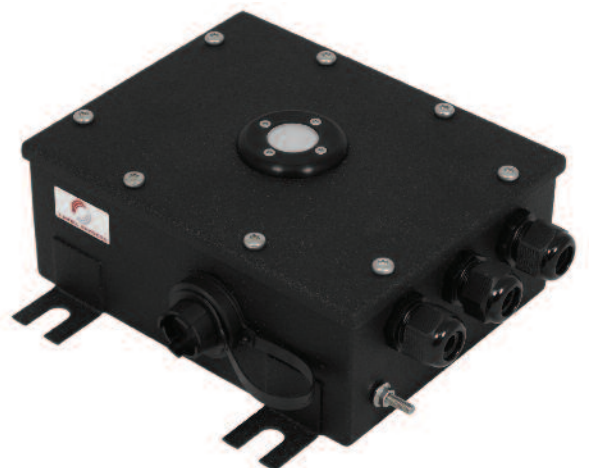


ILLIOS



## ILLIOS Illuminance Photometer For Tunnels



**TUNNEL SENSORS**

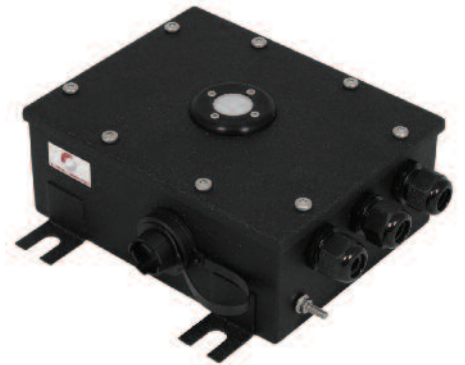
*(ES) Equipements Scientifiques SA - Département Bio-tests & Industries - 127 rue de Buzenval BP 26 - 92380 Garches  
Tél. 01 47 95 99 90 - Fax. 01 47 01 16 22 - e-mail: [bio@es-france.com](mailto:bio@es-france.com) - Site Web: [www.es-france.com](http://www.es-france.com)*

# ILLIOS

## Illuminance Photometer For Tunnels

### FEATURES

- Accurate measurement of illuminance within the tunnel bore
- Silicon photo diode,  $V_\lambda$  filtered to provide a spectral response close to that of the average human eye
- IP65 / NEMA 4X rated external enclosure
- Operating temperature of -30 °C to +70 °C to ensure stable readings across all prevailing ambient temperature conditions
- Self contained intelligent analyser for direct connection to host controller
- Supplied complete with PC based utility software for set-up and control of the instrument



### BENEFITS

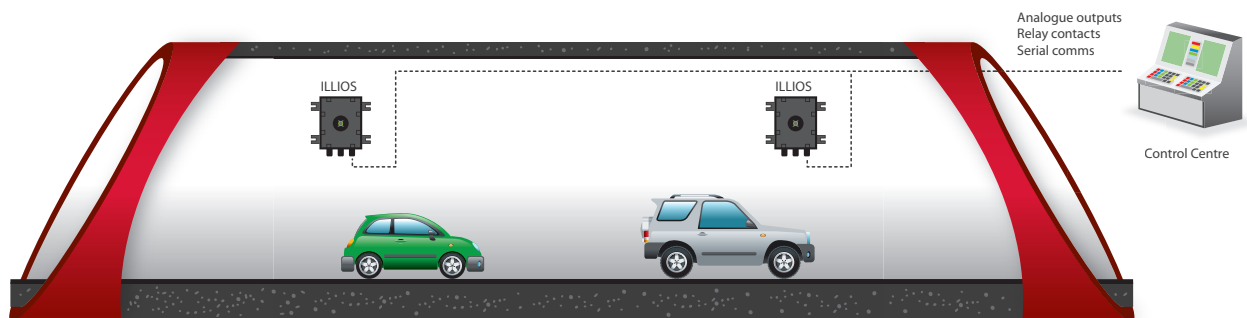
- Designed specifically for monitoring in tunnels
- Rugged design to withstand corrosive atmospheres and regular tunnel washing
- Simple installation and mounting
- No moving parts and low maintenance requirements
- Flexible integration options

### APPLICATIONS

The ILLIOS measures the level of illuminance within the tunnel bore to ensure interior illumination levels are being continuously maintained, in order to affect safe lighting conditions for drivers. Illuminance, or incident lighting, determines the amount of light that covers a specific surface or area within the tunnel.

### OPERATION

The ILLIOS uses a specially designed, highly light-sensitive photocell, filtered to provide a spectral response close to that of the average eye, to react to changes in light levels within the tunnel. The ILLIOS continuously measures cosine corrected planar illuminance within the tunnel thus allowing elimination of directional error. The measurements are converted into an output signal (directly proportional to the illuminance measurement) for hard wire connection and signal transmission to a host controller.



### SYSTEM COMPONENTS

- ILLIOS sensor
- PC based utility software package for set-up and control of the instrument
- Optional variable input AC power supply

## TECHNICAL SPECIFICATION

### MEASUREMENT PERFORMANCE

Parameter	Comment
Measuring Principle	Illuminance
Measurement Reading	Silicon photo diode, $V_{\lambda}$ filtered
Measuring Range	0 – 20,000 lux (user configurable)
Accuracy	+ / - 1 %

### POWER REQUIREMENTS

Voltage	+24 Vdc
Nominal Current Consumption	0.5 A
Power Up Current Consumption	1.0 A

### INTERFACE OPTIONS

Serial Comms	ModBus RTU via RS485 External USB
Analogue Outputs	0 / 2 / 4 – 20mA (isolated and scalable)
Digital Relay Contacts	2 A @ 240 Vac or 3 A @ 60 Vdc

### PHYSICAL

Ambient Operating Temperature	-30 – +70 °C
Operating Humidity	0 – 100 %
Ingress Protection	IP65 for external use
Materials	Powder coated stainless steel
Dimensions	150 x 190 x 80 mm
Weight	1.8 kg



**TUNNEL SENSORS**

