



IMAGE-RESOLUTION LUMINANCE SENSOR LUCI SL

Depending on the area of application, luminance sensors record the average luminance of the tunnel surroundings or the tunnel roadway as target values for light control.

LUCI SL

Using software, the field of view angle and masking can also be subsequently adjusted remotely to precisely suit the respective application (L_{20} , L_{530} , L_{th} or L_{in}).

The LUCI SL luminance sensor measures the luminance according to CIE using digital image analysis and, in addition to the actual measured value, also provides the video image of the sensor (webcam function).

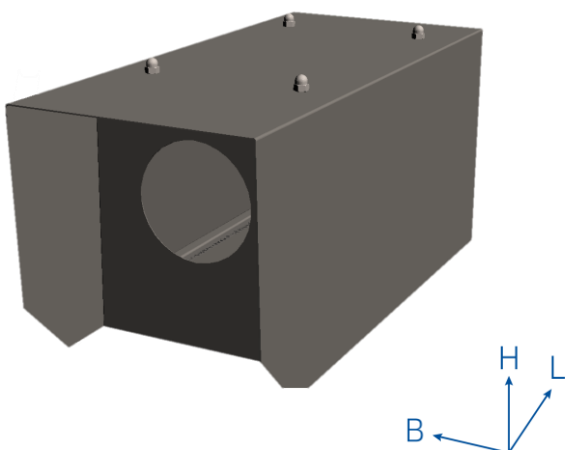
The correct alignment of the sensor can thus be checked and readjusted remotely.

Any sources of interference from lighting technology (e.g. glare) can also be subsequently excluded from the measurement using software during operation or adjusted according to specifications and taken into account in the measurement as a location-specific factor.



- Sensors for the luminance of the tunnel environment
- Measurement method: Integral luminance according to CIE bzw. RABT, EABT, RE-ING / DIN 67524
- Digital image processing, image "maskable"
- Adjustment of the field of view via software
- Precise adjustment to the spectral sensitivity of the human eye, $V(\lambda)$
- Electronically controlled heating against icing
- The windshield is protected against dirt caused by a special aperture ring – using of the congestion effect – effectively protected
- Fault signal output via potential-free contact, for collective message in case of temperature / signal error
- Measurement outputs: Optionally via LAN or 4... 20 mA
- WiFi and cellular modem optional

TECHNICAL DATA:



- Power supply: 230V AC $\pm 10\%$, 45... 63Hz, 55VA
- Measurement method: L according to CIE, RE-ING, DIN 67524
- Field of view: variably adjustable via software
- Measuring range: 0.1... 100,000cd/m² (via HDR mode)
- Outputs: LAN and 4... 20mA / max. load 250Ω
- Network: 1Gbit Ethernet to RJ45 socket
- Adjustment software can be accessed via web browser
- Interference protection: fine fuses, varistor, suppressor diode
- Connection: Maintenance-free terminals 0.5... 2.5mm²
- Housing: stainless steel W.Nr.: 1.4571, requirement class I according to ZTV-Ing. T5, A4
- Cable entries: 2 x M25 x 1.5 / 1 x LAN RJ45
- Dimensions (H x W x D): 210 x 210 x 455mm
- Weight: 7.5kg Degree of protection: IP65

SOLUTION:

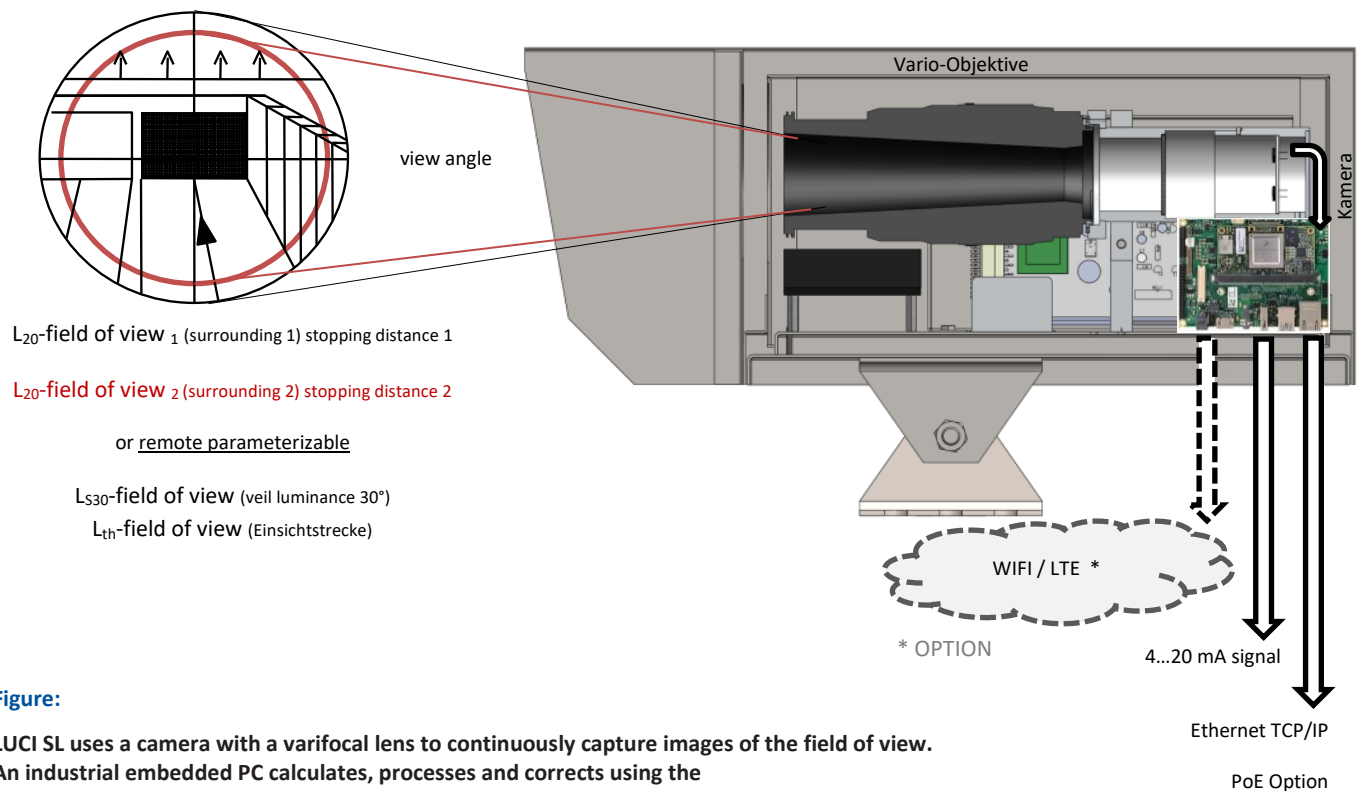


Figure:

LUCI SL uses a camera with a varifocal lens to continuously capture images of the field of view. An industrial embedded PC calculates, processes and corrects using the image processing the luminance image and converts the result into a measured value.

The measurement result is output in parallel, both via LAN and analog 4...20mA interface.

In addition, the clear video image of the field of view (webcam function) is provided for remote data transmission.

The browser-based software offers all the necessary tools for commissioning, parameterization and subsequent checking and adjustment of the sensor.

In addition to LAN transmission, data transmission can optionally be carried out in the immediate vicinity of the sensor via WIFI, or alternatively remotely via a mobile phone connection (LTE).

ADVANTAGES:

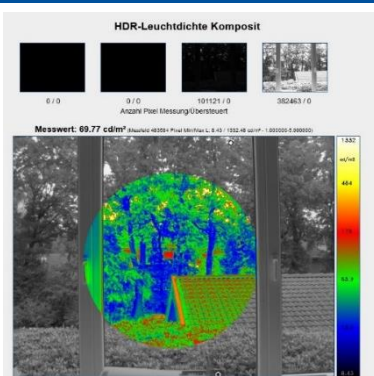


Figure 1:
false color representation

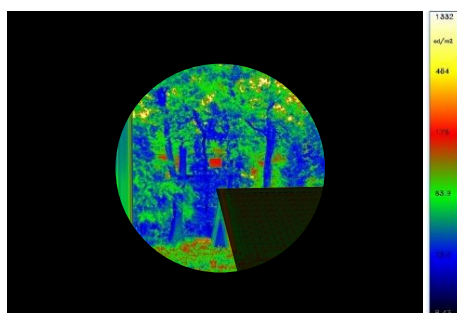


Figure 2:
Masking

- Adjustable field of view, allowing local adjustments to be made
- Remote control of the sensor's orientation, ensuring road safety and energy efficiency
- Optimal adaptation of the sensor to the driver's perspective, thus increasing safety
- LAN connection for data transmission (PoE optional)(WLAN and mobile communications optionally available)
- Video image can be accessed from all current operating systems via a common web browser
- Pixel-precisely adjustable assessment of the measuring field through masking enables:
 - Exclusion of sources of interference from the measurement result
 - Location-specific refined image evaluation
 - Energy optimisation while maintaining road safety