



IMAGE-RESOLVING LUMINANCE SENSOR LUCI SL

Depending on the application, luminance sensors measure the average luminance of the tunnel surroundings or the tunnel roadway as setpoints for lighting control.

LUCI SL

Using software, the field-of-view angle and masking can also be precisely adapted remotely at a later stage to the respective application (L20, LS30, Lth or Lin).

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

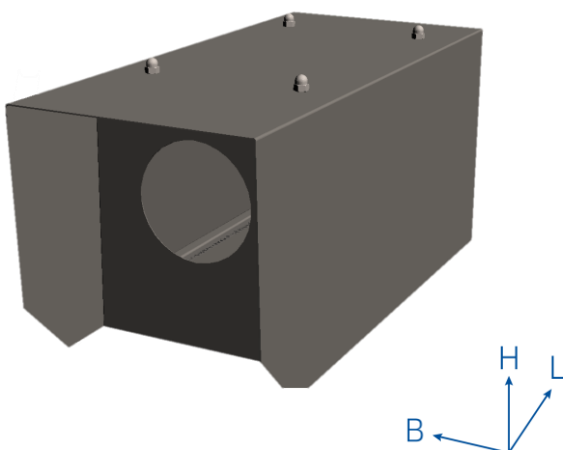
The correct alignment of the sensor can therefore be checked and readjusted remotely.

Any lighting-related sources of interference (e.g. glare) can still be excluded from the measurement later during operation by software or adjusted according to specification and taken into account as location-specific conditions during the measurement.



- Sensors for measuring the luminance of the tunnel surroundings
- Measuring method: integral luminance according to CIE or RABT / RE-ING / DIN 67524
- Digital image processing, image can be masked
- Field-of-view adjustment by software
- Precise adaptation to the spectral sensitivity of the human eye, $V(\lambda)$
- Electronically controlled heating to prevent icing
- The front glass is effectively protected against contamination by a special aperture ring using the stagnation effect
- Fault signal output via potential-free contact, for collective alarm in the event of temperature/signal faults
- Measurement outputs: selectable via LAN or 4...20 mA

TECHNICAL DATA:



- Power supply: 230 V AC $\pm 10\%$, 45...63 Hz, 55 VA
- Measuring method: L according to CIE, RABT, RE-ING and DIN 67524
- Field of view: variably adjustable by software
- Measuring range: 0...10,000 cd/m² (100,000 cd/m² in HDR mode)
- Outputs: LAN and 4...20 mA / max. load 250 Ω
- Network: 1 Gbit Ethernet via RJ45 socket
- Adjustment software accessible via web browser
- Interference protection: fine-wire fuses, varistor, suppressor diode
- Connection: maintenance-free spring-loaded terminals 0.5...2.5 mm²
- Housing: stainless steel material no. 1.4571, requirement class I according to ZTV-ING T5, A4
- Cable entries: 2 $\times$ M25 $\times$ 1.5 / 1 $\times$ LAN RJ45
- Dimensions (H $\times$ W $\times$ L): 210 $\times$ 210 $\times$ 455 mm
- Weight: 7.5 kg Protection rating: IP65

SOLUTION APPROACH:

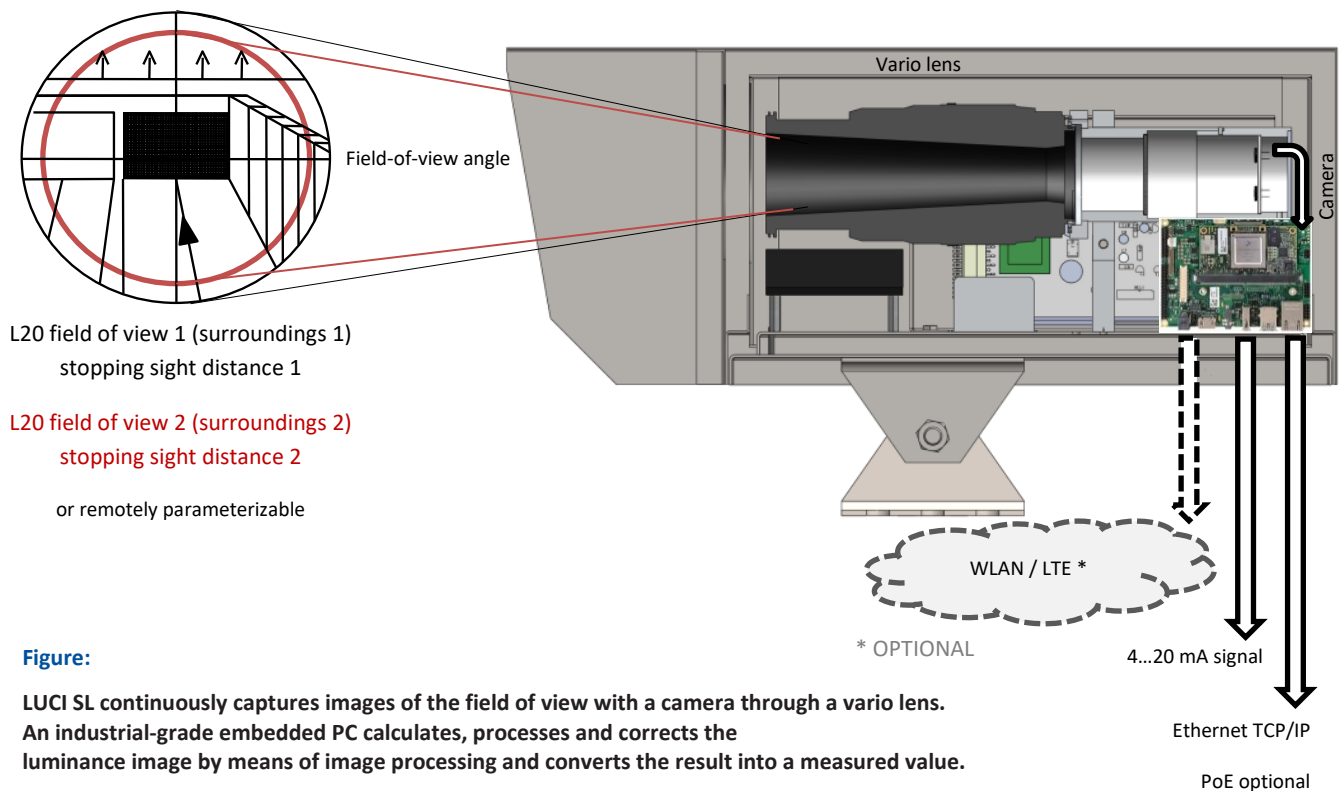


Figure:

LUCI SL continuously captures images of the field of view with a camera through a vario lens. An industrial-grade embedded PC calculates, processes and corrects the luminance image by means of image processing and converts the result into a measured value.

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

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

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

In addition to LAN transmission, data transmission can optionally also take place via WLAN in the vicinity of the sensor or, alternatively, remotely via a cellular connection (LTE).

BENEFITS:

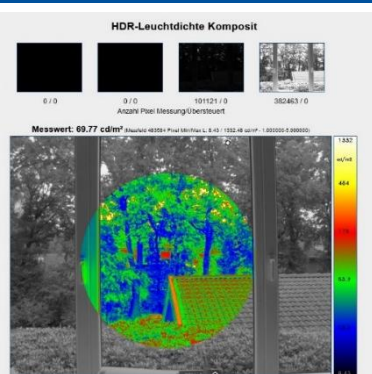


Figure 1:

False-color display

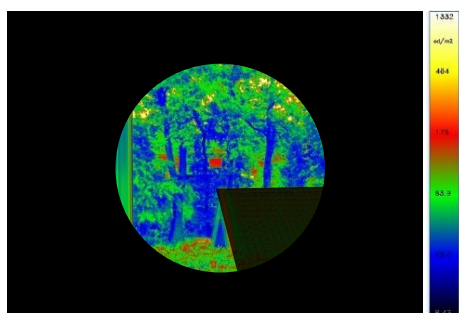


Figure 2:

Masking

- On-site adjustable field of view for local adaptation
- Remote checking of sensor alignment, ensuring traffic safety and energy efficiency
- Optimal adaptation of the sensor to the driver's perspective, thereby increasing safety
- LAN connection for data transmission (PoE optional); WLAN and cellular connection optionally available
- Video image can be accessed from all current operating systems using a standard web browser
- Pixel-precise adjustable evaluation of the measuring field by masking enables:
 - Exclusion of interference sources from the measurement result
 - Location-specific refined image evaluation
 - Energy optimization while maintaining traffic safety