ELECTRIC-SPECIAL
Photronicsysteme GmbH

IMAGE-ASSISTED LUMINANCE SENSOR LUCI Neo

L_{20}- luminance sensors measure the average luminance of the tunnel surroundings from the stopping sight distance and use this value as the setpoint for lighting control.

LUCI Neo
Thanks to the adjustable field-of-view angle (17–30°), the measurement field can be precisely adapted on site to the mounting position, even if the installation location is outside the stopping sight distance.

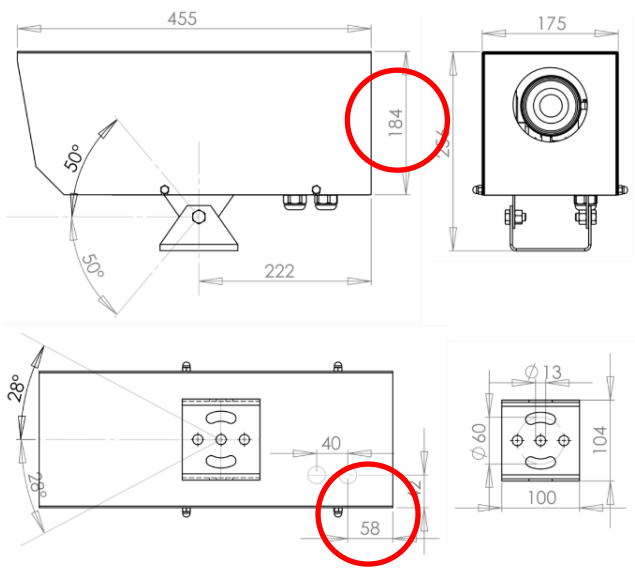
In accordance with CIE requirements, the LUCI Neo luminance sensor measures L_{20} luminance and, in addition to the actual measured value, also provides a video image from the sensor.

The correct alignment of the sensor, as well as any photometric interference sources, such as glare, can be remotely checked and detected by software during operation.

Mounting brackets are available as accessories for pole mounting (TRALUCI/EM) in standard sizes from 80 to 140 mm, as well as for wall mounting (TRALUCI/CE).

- Sensors for measuring the luminance of the tunnel surroundings
- Image support for the proven analogue sensor
- Measurement method: integral luminance according to CIE-L_{20} or RABT (EABT) / DIN 67524
- Long-term stable amplifier, high reliability
- Variable optics for adjusting the field of view
- Precise adaptation to the spectral sensitivity of the human eye, V(λ)
- Electronically controlled heating to prevent icing
  The front window is effectively protected against contamination by a special aperture ring utilizing the stagnation effect
  Fault signal output via potential-free contact for collective signalling in the event of temperature or signal faults
- Up to two separate measuring channels with individual measuring ranges, e.g. 0–1,000 and 0–10,000 cd/m²)

TECHNICAL DATA:



- Power supply: 230 V AC ±10%, 45–63 Hz, 55 VA
- Measurement method: L_{20}- CIE, RABT (EABT) and DIN 67524
- Field of view: 17–30°, variably adjustable on site
- Measuring range: 0–10,000 cd/m² (up to 2 measuring channels)
- Output: 4–20 mA / max. load 250 Ω
- Network: 1 Gbit Ethernet via RJ45 socket and Wi-Fi
- Adjustment software accessible via web browser
- Interference protection: miniature fuses, varistor, suppressor diode
- Connection: maintenance-free spring terminals, 0.5–2.5 mm²
- Housing: stainless steel, material no. 1.4571, double-walled, thermally insulated, requirement class I according to ZTV-ING Part 5, Section A4
- Cable entries: 2 × M25 × 1.5 / 1 × LAN RJ45
- Dimensions (H × W × D): 185 × 175 × 455 mm
- Weight: 9.5 kg Protection rating: IP65

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SOLUTION APPROACH:

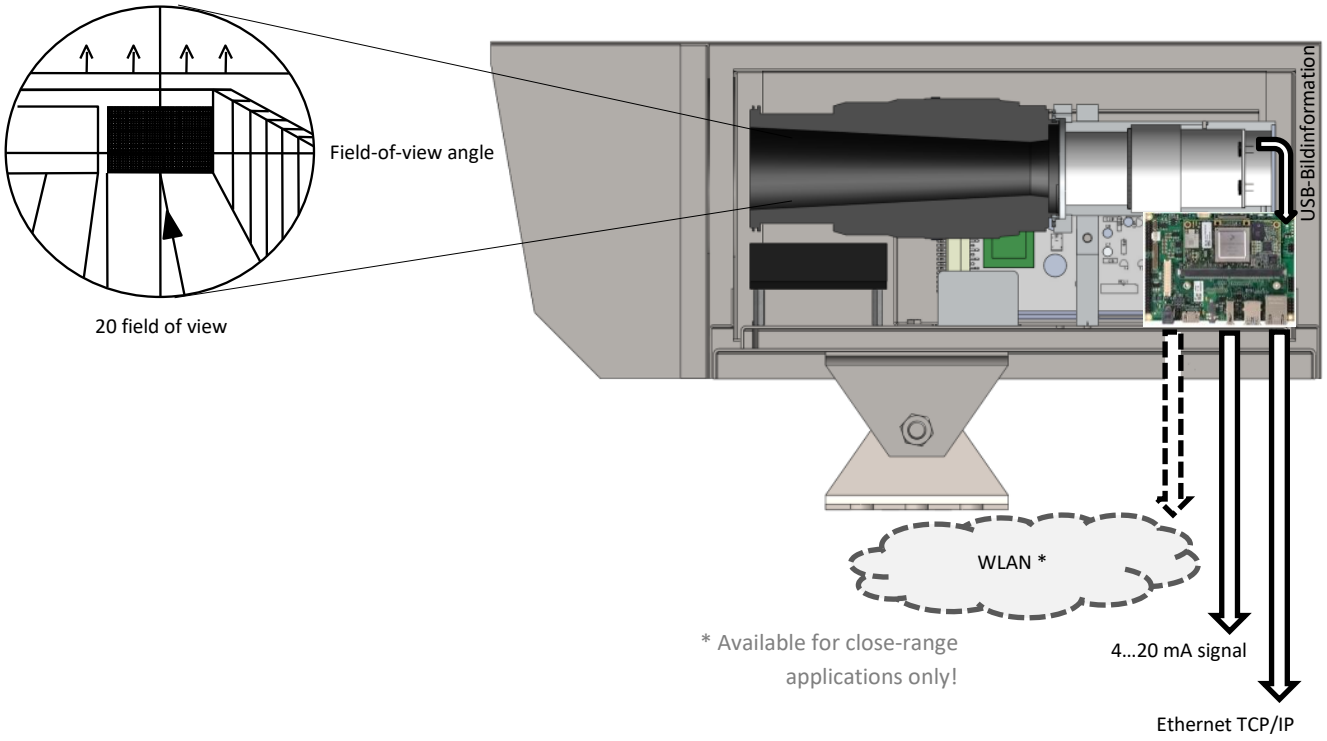

Figure:
For LUCI Neo, the proven LUCI L20 luminance camera has been enhanced with a combination of a CMOS video camera integrated into the photometer head and an industrial-grade embedded PC.

The video camera captures the sensor's field of view, while the embedded PC processes the image data, enabling remote, image-assisted verification of the sensor alignment and detection of potential interference sources.

The measured value from the luminance camera is available as a 4–20 mA signal.
In addition, the video image of the field of view is provided for remote data transmission.
The adjustment software provides all the tools required to verify correct sensor alignment.

In addition to LAN transmission, data can also be transmitted via Wi-Fi within the immediate vicinity of the sensor.

BENEFITS:

Figure:

The browser-based adjustment software enables the correct alignment of the sensor to be checked remotely, even during operation.

- Remote monitoring of the sensor alignment, thereby ensuring traffic safety and energy efficiency
- Detection of measurement interference sources (remotely via software, even during operation)
- Field of view adjustable on site, allowing adaptation to local conditions
- Optimum adaptation of the sensor to the driver's perspective, thereby increasing safety
- LAN and Wi-Fi connectivity for data transmission
- Video image accessible from all current operating systems using a standard web browser
- Special software tools for remotely verifying correct alignment

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