

Visibility sensor



Description

The visibility sensor is a device for the determination of optical visibility in the range between 10 ... 2000m; these peculiarities make the instrument suitable for monitoring on motorways, highways or bridges.

The visibility is determined by measuring the reflection obtained through the application of the scattering technique with optical elements positioned at 45 °.

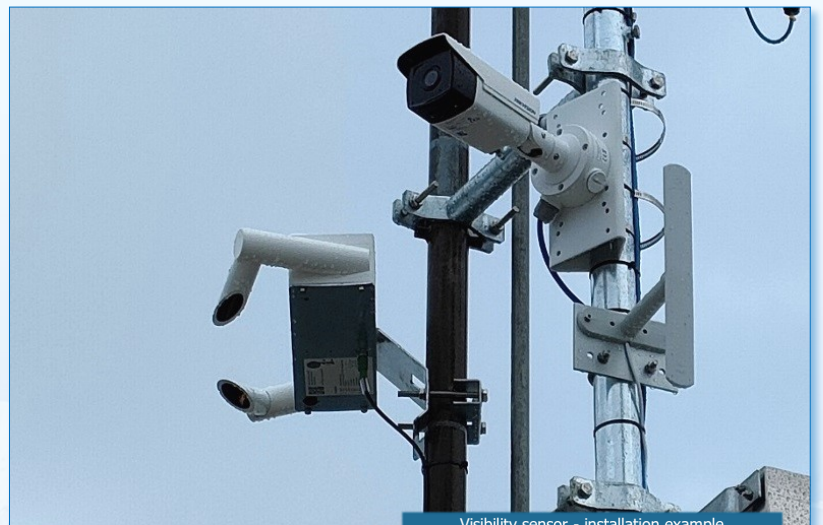
Particles in the measuring area (for example, fog drops) disperse the infrared light emitted by the transmitter. The receiver measures the percentage of scattered light, allowing the instrument to calculate the degree of reflection.

Depending on this monitoring and depending on the basic set-up, the instrument processes the overall visibility status.

The processing result can be transmitted to an external datalogger via an RS485 digital interface.



Visibility sensor



Visibility sensor - installation example

Technical specifications may be varied without prior notice

Technical specifications

| GENERAL CHARACTERISTICS | |
|------------------------------------|--|
| Dimesions | 500x230x80mm |
| Weight | 4Kg |
| Protection type | IP66 |
| Interfaces | RS485 (2-wire, half duplex) Analogue output (4 ... 20mA) |
| Value update | 1 minute |
| Cable lenght | 10m |
| OPERATING CONDITIONS | |
| Operating temperature | -40 ... +60°C |
| Operating relative humidity | 0 ... 100% RH |
| Power supply | 20...30VDC; typical 24Vdc |
| Power consumption | <200mA (motor running and current outputs active), ~100mA in normal mode and RS485 output |
| Power | 3W (typical); 10W (max.) |
| Protection class | III (SELV) |
| VISIBILITY | |
| Measuring principle | 45° forward scattering |
| Measuring range | 10 ... 2000m |
| Measuring resolution | 1m |
| Accuracy | ±10% visibility |

Ordering codes

Visibility sensor 10 ... 2000m

PCTVI010

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