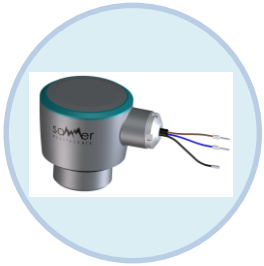


Monitoring of tunnels by using radar based level sensor and data logger with threshold options.



**Radar level sensor: SomLevel 15**  
Non contact Maintenance free  
Competitive and easy to install



| Level sensor          |  |
|-----------------------|--|
| Measurement range     | up to 15 m (49.21 ft)  |
| Accuracy              | ≤ 2 mm   |
| Beam angle            | 8°   |
| Measurement frequency | W-band (80 GHz)  |
| Output signal         | 4 ... 20 mA HART or SDI-12   |
| Process fitting       | Thread G1½, 1½NPT, R1½   |
| Mounting connection   | Thread G1, 1NPT, R1  |
| Process pressure      | -1 ... +3 bar (-100 ... 200 kPa, -14.5 ... 43.51 psig)                     |
| Process temperature   | -40 ... +80 °C (-40 ... +176 °F)   |
| Ambient temperature   | -40 ... +80 °C (-40 ... +176 °F)   |
| Operating voltage     | 12 ... 35 VDC  |
| Material              | Wetted parts: PVDF<br>Process seal: FKM<br>Connection cable: PVC insulated |
| Protection rating     | IP68   |
| Size Ø x H            | Straight cable output: Ø76 x 109 mm<br>(Ø2.99 x 4.28 in)                   |
| Weight                | 0.7 kg (1.543 lbs)   |



### MRL7 Data logger with integrated data transmission

- ✓ Modem as 2G/3G/4G available
- ✓ Solar module can be connected (solar charger integrated)
- ✓ **Camera** can be connected directly
- ✓ Memory (internal) 4 MB failure-resistant flash memory (equivalent to approx. 500,000 measurement values)
- ✓ Interfaces: 4xAnalog, RS-485, SDI-12
- ✓ 2 way communication with SOMMER sensor
- ✓ Logger can be operated fully independently (with batteries or solar module), integrated solar charge controller, protection IP 67



### MRL7 data logger additional optional options

- ✓ SMS can be send once trashold level is reached
- ✓ E-mail can be send once trashold value is rached
- ✓ 2 way communication: sensor can be accessed remotly and parameters can be adjusted



### Signal light system

- ✓ Orange: 20cm and above
- ✓ Orange and Red: 40cm and above.



## System to be used:

- ✓ LEVEL SENSORS
- ✓ One RL-15 radar level sensor is mounted on each of the two river banks directly at the ford. With an installation height of 4 m above the road surface and sufficient distance to the river bank, continuous measurement of the water level is guaranteed.
- ✓ SURVEILLANCE CAMERAS
- ✓ In addition to the level sensors, WDR cameras are mounted on the two masts, which look across the ford in both viewing directions. In order to be able to clearly assess a flood situation at night, LED street lights are mounted next to the cameras to illuminate the ford and the bank areas.
- ✓ DATA ACQUISITION
- ✓ An MRL-7 data logger installed in the central control cabinet records the water levels measured by the two level sensors and the images from the camera on the right bank of the river.
- ✓ A second data logger is mounted on the mast on the left bank of the river. This captures the images from the second camera and forwards them to the central MRL-7.

**Details:** <https://www.sommer.at/en/application/hydrology/flood-warning-achfurt>

**YouTube:** [https://www.youtube.com/watch?v=kPK1K\\_-HfCk&t=31s](https://www.youtube.com/watch?v=kPK1K_-HfCk&t=31s)