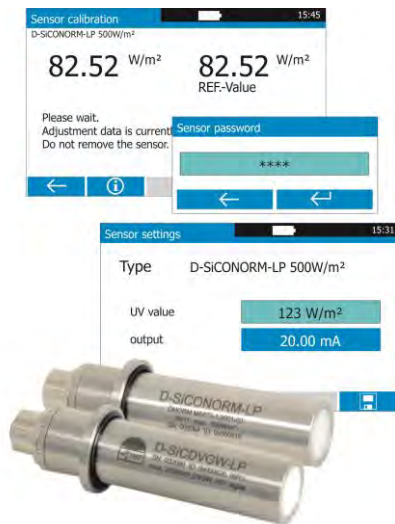


## ZED GmbH UVC Sensor System – versatile options for field applications and re-calibration

In most UV systems monitoring of UV-C irradiance is essential to ensure disinfection on water treatment systems or to ensure the effect on photochemical processes. The UV probes used for these measurements are exposed to high energy UV radiation which may cause aging effects. Due to that periodic test and re-calibration is required in different regulations. Cyclic re-calibration requires noticeable effort if re-calibration is done by the original manufacturer.



The 2<sup>nd</sup> generation ZED Digital UVC sensors allow to be re-calibrated by the plant manufacturer or even by the operator in a simple process. The ZED SmartMeter used together with a certified ZED reference sensor guides the user through an automated process of only a couple of minutes. The complete re-calibration history is stored inside each sensor; a password can be set to ensure that re-calibration is done by qualified personnel only. The option for re-calibration is available for all digital UVC sensors, including ZED digital UV sensors that have analog output.

Another burden plant manufacturers may be faced with is the big variety of sensors that are needed for different types of UV systems: diverse nominal irradiance values and electrical interface specifications.

The 2<sup>nd</sup> generation ZED Digital UVC sensors use enhanced automatic internal range selection that allow for high resolution measurement values along the entire dynamic range, e.g. 0.5...500 W/m<sup>2</sup> (low pressure) or 5...3000 w/m<sup>2</sup>(medium pressure). Thus one type of sensors can be used to cover a wide range of applications.

If conventional analog signal transmission is needed, again, one type of sensors can be used in different scenarios. The analog interface can be freely set to meet any requirement – the same sensor could be set to drive 15mA at 300 W/m<sup>2</sup> or 20mA at 50 W/m<sup>2</sup> . Once more, configuring the analog interface can easily be done on site using the ZED SmartMeter while the calibration remains valid.

Digital connection enables transmission of absolute irradiance values in W/m<sup>2</sup> via ModBus RTU over RS485 – here the sensor functions as standalone measurement unit and any computing or visualization device can be directly connected. Data transmission along long distances is also possible as connecting multiple sensors to the same cable. Configuring settings, as ModBus address, can be done on site using the ZED SmartMeter.

The ZED digital UVC sensor combines all these benefits in a single device, even if used in traditional systems with analog interface.

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