

# Measurement Equipment

## UV-Sensors according to German Standard DVGW

### UV-Sensor D-SiCDVGW / SiCDVGW

high innovative:  
digital sensor - one for all



#### Features

- ↪ measuring of UV-intensity according to German standard DVGW W294
- ↪ digital types
  - multiple integrated measurement ranges combined with automatic range selection ensure high accuracy
  - direct output of measured UV-value in W/m<sup>2</sup>
  - fail safe signal transmission even with long cables
  - connecting additional sensors to the RS485 bus enables multi sensor operation
- ↪ voltage or current types
  - different calibration values according to system requirements
  - high resistance to solarization (degradation)

| sensor type          | aperture angle | measurement range                                | output signal - protocol | min. load resistance R <sub>min</sub> | max. load resistance R <sub>max</sub> | lamp types            |                       |
|----------------------|----------------|--|--------------------------|---------------------------------------|---------------------------------------|-----------------------|-----------------------|
| <b>digital types</b> |                |  |                          |                                       |                                       |                       |                       |
| D-SiCDVGW-LP*        | 40°            | 2...250W/m <sup>2</sup>                          | RS485 - ZCON/ModBus**    | -                                     | -                                     | low pressure lamps    |                       |
| D-SiCDVGW-MP*        | 40°            | 20...1000W/m <sup>2</sup>                        | RS485 - ZCON/ModBus**    | -                                     | -                                     | medium pressure lamps |                       |
| D-SiCDVGW-LP-160*    | 160°           | 2...500W/m <sup>2</sup>                          | RS485 - ZCON/ModBus**    | -                                     | -                                     | low pressure lamps    |                       |
| D-SiCDVGW-MP-160*    | 160°           | 20...3000W/m <sup>2</sup>                        | RS485 - ZCON/ModBus**    | -                                     | -                                     | medium pressure lamps |                       |
| <b>voltage types</b> |                |  |                          |                                       |                                       |                       |                       |
| SiCDVGW-U2-LP        | 40°            | calibration value is to be specified by customer | 0...2V                   | 220Ω                                  | -                                     | low pressure lamps    |                       |
| SiCDVGW-U2-MP        | 40°            |  | 0...2V                   | 220Ω                                  | -                                     | medium pressure lamps |                       |
| SiCDVGW-U10-LP       | 40°            |  | 0...10V                  | 660Ω                                  | -                                     | low pressure lamps    |                       |
| SiCDVGW-U10-MP       | 40°            |  | 0...10V                  | 660Ω                                  | -                                     | medium pressure lamps |                       |
| SiCDVGW-U2-LP-160    | 160°           |  | 0...2V                   | 220Ω                                  | -                                     | low pressure lamps    |                       |
| SiCDVGW-U2-MP-160    | 160°           |  | 0...2V                   | 220Ω                                  | -                                     | medium pressure lamps |                       |
| SiCDVGW-U10-LP-160   | 160°           |  | 0...10V                  | 660Ω                                  | -                                     | low pressure lamps    |                       |
| SiCDVGW-U10-MP-160   | 160°           |  | 0...10V                  | 660Ω                                  | -                                     | medium pressure lamps |                       |
| <b>current types</b> |                |  |                          |                                       |                                       |                       |                       |
| SiCDVGW-I-LP         | 40°            |  | 4...20mA                 | -                                     | 9V⇒330Ω /                             | -                     | low pressure lamps    |
| SiCDVGW-I-MP         | 40°            |  | 4...20mA                 | -                                     | 24V⇒1kΩ                               | -                     | medium pressure lamps |
| SiCDVGW-I-LP-160     | 160°           |  | 4...20mA                 | -                                     | 9V⇒330Ω /                             | -                     | low pressure lamps    |
| SiCDVGW-I-MP-160     | 160°           |  | 4...20mA                 | -                                     | 24V⇒1kΩ                               | -                     | medium pressure lamps |

\*certification pending

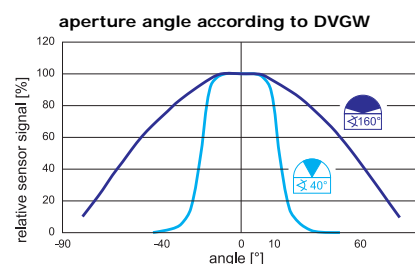
\*\*call for ModBus sensors

|  |   |                               |                            |
|--|---|-------------------------------|----------------------------|
| <b>sensitive element:</b>                | silicon carbide (SiC) diode   | <b>sensorbody material:</b>   | stainless steel 1.4404     |
| <b>temperature drift:</b>                | < 0,1 %/K   | <b>operating temperature:</b> | 0...40°C                   |
| <b>protection class:</b>                 | IP64 on terminal ends if connected to appropriate sensor cable  | <b>max. pressure:</b>         | 10bar (if used with MF001) |
| <b>supply voltage U<sub>B</sub>:</b>     | 9... 24V DC stabilised (min 12V DC for -U10 types)  |                               |                            |
| <b>operation current:</b>                | SiCDVGW-Uxx-xx: <10mA   SiCDVGW-I-xx: <30mA   D-SiCDVGW-xx: <20mA   |                               |                            |
| <b>connections:</b>                      | cable, length 2.90m, with plug M12 (other cable lengths on request)   |                               |                            |
| <b>recommended monitoring equipment:</b> | SiCDVGW-Uxx-xx: on request<br>SiCDVGW-I-xx: PRO11DPI-I, PRO16DPI-I, UV-Compact D<br>D-SiCDVGW-xx: PRO11DPI-I, PRO16DPI-I, PRO30, UV-Compact D, ZCAB, ZCON-mini, PLC systems |                               |                            |
| <b>dimensions / weight:</b>              | diameter of the body: 20mm   diameter of the outer ring: 27mm   length: 91mm   insert length: 59mm<br>83g (without cable)   |                               |                            |
| <b>mounting restrictions:</b>            | use of an DVGW compliant measurement window MF001 is mandatory (see page no. 89)  |                               |                            |

#### Note:

The sensors are adjusted by using a point source (UVC 254nm).

When irradiation of a source different from point sources is being measured absolute values may differ since results of radiation physical measurements strongly depend on geometry.



subject to change