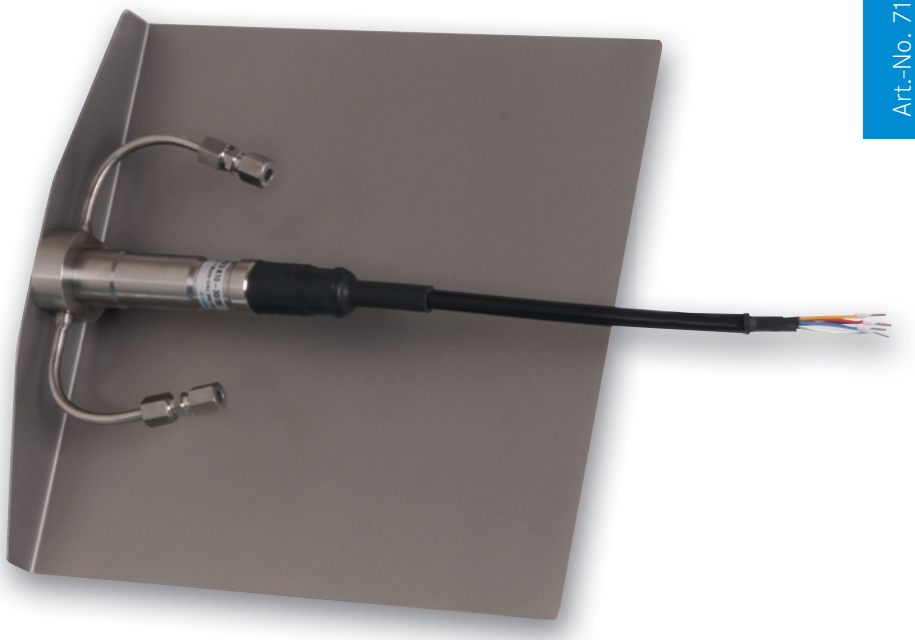
# ET4 VW

Electric settlement cell

HQ

Art.-No. 71.11



The electric settlement cell comprises a relative pressure sensor that is loaded with a water-glycol mixture or, upon requirement, with silicone oil via a plastic double line. The sensor measures the hydrostatic pressure in comparison with a reference point that is installed outside the settling area. These double lines are designed as a continuous ring for subsequent filling. Any occurring settlement causes a change of position of the sensor which in turn causes a change in pressure of this fluid (difference between central unit and cell) which is then measured. Design and structure of the cell can be optionally changed upon customer requirements. The figure shows a standard unit with a 30x30cm stainless steel plate for installation in a fill or embankment. The available versions of the cells are listed in the table below.

| **Technical data:** | |
|---|---|
| Dimensions: | 30x30x5 mm |
| Weight: | 1,8 kg |
| Material: | V4A 1.4571 |
| Protection classification: | IP 68 |
| Overload protection of the measuring area: | 50 % |
| Linearity, including hysteresis: | ± 0.5% of final value |
| Linearity, including hysteresis, opt.: | ± 0.1% of final value |
| Resolution: | ± 0.02%*1 of final value |
| Thermal zero shift: | <0.02%/°C*1 |
| | |
| **Sensor-specific specifications** | |
| Temperature range: | From -20 to +80°C |
| Current consumption: | Pulse excitation |
| Operating frequency: | 2kHz - 3.3 kHz |
| Supply, pulse triggering: | 60 V |
| Option ex. protection*2: | EEx ib IIB T4 |
| | EEx ib IIB BTI |

*1 Deviation during operation at high temperatures upon request
*2 For Ex versions the cable data must be considered


## Measuring ranges

| Measuring range | Water column | Accuracy |
|---|---|---|
| 0 to 0.6 bar | 6 m | ±10mm |
| 0 to 1.0 bar | 10m | ±15mm |
| 0 to 2.0 bar | 20m | ±50mm |

## Design variants

- Pressure sensor with vibrating wire technology LVW
- KE pressure sensor, piezo-resistive, 4-wire system
- KO pressure sensor, piezo-resistive as before, with integrated amplifier and optionally with temperature sensor
- Pressure sensor with vibrating wire technology VW