

# GLÖTZL Baumeßtechnik

## Electric Stress Sensor, Model with Hydraulic Pressure Pad and Pressure Sensor

**Type E . . .**  
**Art. No.: 68. . .**

The electric stress sensor with hydraulic pressure pad and pressure sensor is used for measurements of earth pressure, shuttering girder pressure, concrete pressure and joint pressure up to max. 600 bars. The pressure pad connected to an electric transducer is filled with a hydraulic fluid in a closed system. When loading the pressure pad, the arising hydraulic pressure is transferred to the diaphragm of the electric transducer, and converted into a stress proportional to the loading.

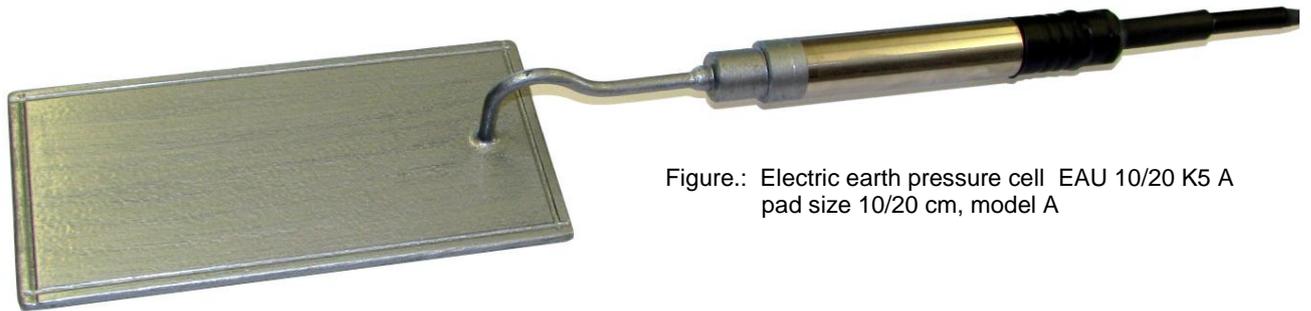


Figure.: Electric earth pressure cell EAU 10/20 K5 A  
pad size 10/20 cm, model A

### Models:

- |  |   |
|--|---|
| <b>B</b> Concrete stress and joint pressure sensor | <b>S</b> Shuttering girder pressure sensor        |
| <b>E</b> Earth pressure sensor                     | <b>X</b> Special models on client's specification |

### Types:

**AU** Pressure sensor piezoelectric, 4-conductor system

#### Technical data:

Supply	constant current 1 mA
Supply optional	4 mA or 10V <sub>DC</sub>
Output signal	0–250 mV
Overload protection (1–50 bars)	50% f.s.
Linearity incl. hysteresis	< 0.5% f.s.
Linearity incl. hysteresis optional	< 0.1% f.s.
Thermal zero drift	0.025 mV/K
Operating temperature range	-15 up to +80 °C
Storage temperature range (dry)	-40 up to +100 °C
Long-term drift temperature dependent (at 0 °C up to 50 °C), typ.	0.25 mV

#### Connections:

+ Supply	black	(1)
- Supply	yellow	(2)
+ Output	red	(3)
- Output	blue	(4)
Screen	yellow/green	
Resonance	> 30 KHz	
Meas. frequency	1 KHz	

**AI** Pressure sensor piezoelectric as above, but with installed amplifier and optional temperature sensor

#### Technical data:

Supply	15 up to 30 V
Output signal	4–20 mA 2-conductor system
Overload protection	1–50 bars, 50% f.s.
Linearity incl. hysteresis	< 0.5% f.s. (optional 0.1% f.s.)
Temperature coefficient	< 0.01%/ °C f.s.
Burden	(U <sub>s</sub> -9V) : 20 mA
Operating temperature range	-15 °C up to +60 °C
Storage temperature range	-15 °C up to +100 °C
Initialization time after switch-on	6 seconds

Optional with temperature sensor AD 590, output signal 1µA/K

**VW** Vibrating wire sensor, operating frequency from 2000 cps up to 3300 cps  
Thermistor type BR55, T<sub>25</sub> = 3000 Ohm

**Pressure pad size:**

$\frac{12}{\varnothing 120}$	$\frac{17}{\varnothing 170}$	$\frac{7/14}{70 \times 140}$	$\frac{10/20}{100 \times 200}$	$\frac{15/25}{150 \times 250}$	$\frac{20/30}{200 \times 300}$	$\frac{40/40}{400 \times 400}$ (mm)
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**Filling:**

**Q** Pressure pad with mercury filling for the material surrounding the cell, E-modulus  $\geq 10.000$  bars

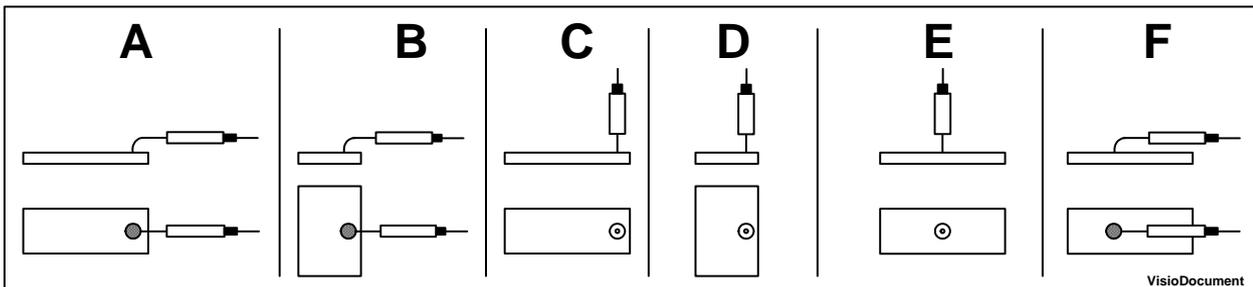
**K** Pressure pad with oil filling for the material surrounding the cell, E-modulus  $\leq 10.000$  bars

**Measuring ranges:**

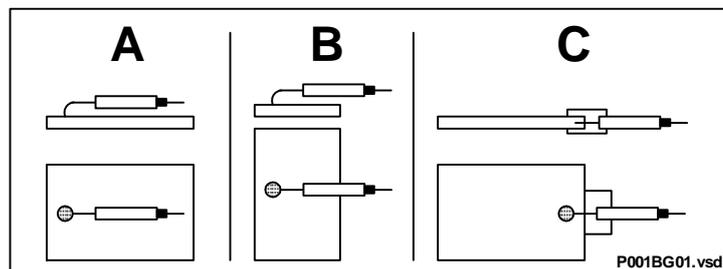
0-2 bars	0-20 bars	0-200 bars
0-5 bars	0-50 bars	0-400 bars
0-10 bars	0-100 bars	0-600 bars

**Figures:**

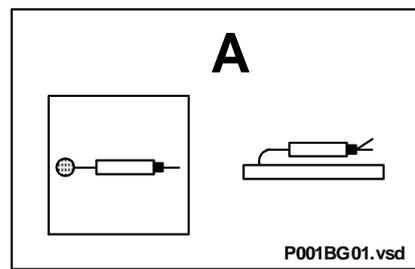
for pressure pad sizes 12, 17, 7/14, 10/20, 15/25



for pressure pad sizes 20/30 and larger



for pressure pad sizes 40/40



**Accessories:**

**N** Repressurizing tube

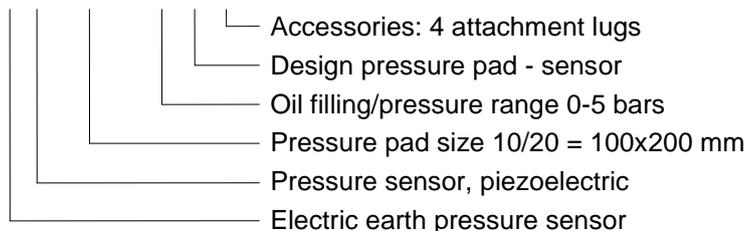
**KF** Plastic cover at one side over pressure pad for encasing with concrete

**Z4** 4 attachment lugs at the rim of pressure pad

**KR** Plastic cover over the rim of pressure pad

**Type key (example for ordering):**

68.21.04.22.4 = EAU 10/20 K5 A Z4



**Registration:**

- Battery-operated readout units
- Manually operated change-over manifolds
- Intermediate amplifier for remote control
- Automatic measuring and recording devices with data carrier resp. memory

Subject to technical alterations

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