

# Jointmeter

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## HIGHLIGHTS

- Variable anchor point spacing
- Robust design and simple installation
- Various models for good matches to spatial conditions
- Suitable for automatic data acquisition



*Joint meter with electric displacement transducer*

## Field of Application

Jointmeters are used to measure fissure dimensions in buildings or in rock. The relative displacement of the anchor points can be accurately measured. The robust design and wide achievable span guarantee trouble-free use in difficult conditions, such as movement of masses, slope instability and rock formations.

## Principle of Operation and lay-out

A hinge coupling is screwed onto a threaded rod anchored in the rock, one on each side of the fissure to be monitored. The measuring rods, guided in a tube, are anchored on the one side and the measuring head on the other side can accommodate a dial gauge or electrical displacement transducer. The guide tube is telescopic, with the longer part sliding over the shorter.

This construction and the use of hinge couplings guarantee accurate measurements, since possibly arising torsional and buckling forces do not lead to measurement errors. The standard spacing between anchor points is selectable in a range from 200 mm to 1.080 mm and is adjustable on site. With suitable support points, much larger anchor point spacing can optionally be achieved (surface extensometer)

Two different types are available. Parallel jointmeters measure the width of the fissure between two parallel surfaces and normal jointmeters measure the fissure between two mutually perpendicular surfaces.



*3D-joint meter in special design and for automatic data acquisition*

## Jointmeter

### Data acquisition

Data acquisition is the same as with the GEODATA rod extensometers, where the dial gauge and the electrical displacement transducers are fully compatible. This also guarantees easy linking into the DAMOS data capturing and the KRONOS information systems. This is of particular importance for possible alarm functions, e.g. to alert against rockfalls.

### Technical specifications

|  |                                    |
|--|------------------------------------|
| Cardan joint                                 | stainless steel                    |
| Measuring head, Hüllrohre, Gestängefixierung | brass, optional nickel-plated      |
| Measuring rod                                | fibreglass; diameter = 10 mm       |
| Protective cap                               | plastic                            |
| Span   | 200 mm to 1.080 mm                 |
| Thread bold                                  | M16 (requires hole diameter 18 mm) |

#### Dial gauge

|            |                          |
|------------|--------------------------|
| Type       | mechanical or electrical |
| Resolution | ± 0,01 mm                |

#### Displacement transducer (optional)

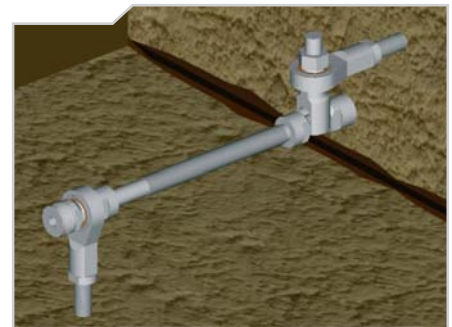
|                 |                                    |
|-----------------|------------------------------------|
| Measuring range | 50 mm, 100mm; 250mm optional       |
| Linearity       | ± 0.1 % FS (without linearization) |
| Sensor type     | Potentiometer                      |
| Output signal   | optional 4 to 20 mA                |
| Sealing class   | IP 65                              |



*Reading with dial gauge*



*Parallel-crackmeter*



*Orthogonal-crackmeter*

*The following other data sheets are associated with this data sheet::*

Software:            *KRONOS Tunnel Information System*