

## CS40



### Description

The crack sensor CS40 is used to monitor cracks on structures. Another area of application is the dendrometer, for measuring the perimeter of tree trunks. The path sensor is suitable for single-axis distance measurement for the measuring range of  $\pm 5\text{mm}$ .

The crack sensor is constructed in strain gauges technology.

The CS40 crack sensor is installed with adhesive M-Bond 30, M-Bond 31, or with a steel cable to measure the circumference of tree trunks. For the fastening of a steel cable, millings are available, which are closed similar to a fork head, with cylinder pins.

The strain gauges are covered with silicone. The path sensor has a protection class of IP65. Due to the open construction, additional measures to protect against water and moisture are recommended for long-term outdoor applications, e.g. covers or additional coatings with silicone.

The GSV-2MSD or GSV-6LTE measuring amplifiers are suitable for data collection and acquisition.

## Technical Data

### Electrical Data

|   |           |      |
|---|-----------|------|
| Input resistance                        | 350       | Ohm  |
| Tolerance input resistance              | 10        | Ohm  |
| Output resistance                       | 350       | Ohm  |
| Tolerance output resistance             | 10        | Ohm  |
| Insulation resistance                   | 5         | GOhm |
| Rated range of excitation voltage f     | 2.5 ... 5 | V    |
| Operating range of excitation voltage f | 1 ... 10  | V    |
| Zero signal to                          | -0.5      | mV/V |
| Zero signal from                        | 0.5       | mV/V |
| characteristic value range min          | 0.8       | mV/V |
| characteristic value range max          | 1.2       | mV/V |

### Precision data

|  |      |       |
|--|------|-------|
| Relative linearity error                   | 1    | %FS   |
| Relative zero signal hysteresis            | 1    | %FS   |
| Temperature effect on zero signal          | 0.1  | %FS/K |
| Temperature effect on characteristic value | 0.05 | %RD/K |
| Relative creep                             | 0.05 | %FS   |

### Connection Data

|                        |                  |
|------------------------|------------------|
| Connection type        | 4 conductor open |
| Name of the connection | STC-31V-4        |
| Cable length           | 3 m              |





### Environmental data

|                               |               |
|-------------------------------|---------------|
| Rated temperature range f     | -10 ... 65 °C |
| Operating temperature range f | -25 ... 85 °C |
| Storage temperature range f   | 0 ... 50 °C   |
| Environmental protection      | IP64          |

### Basic Data

| Type                   | Wegsensor |
|------------------------|-----------|
| Nominal displacement   | 5 mm      |
| Operating displacement | 150 %     |

## accessories

| Description   |                    | Description   |
|---|--------------------|---|
|  | M-Bond-30          | gelatinous, 2-component adhesive in 50 ml double cartridge;<br>50ml Methacrylate, 50ml Hardener;<br>Operating temperature -55 ° C ... 120 ° C |
|  | M-Bond-31          | gelatinous, 2-component adhesive in 50 ml double cartridge,<br>50ml Methacrylate, 50ml Hardener;<br>Operating temperature -55 ° C ... 120 ° C |
|  | WS-14              | Dispensing gunl for 37ml and 50ml double cartridges.  |
|  | Mixing-tool Pack10 | Mixing nozzles for double cartridge 50g M-Bond-30 and M-Bond-31;<br>package of 10;  |