

## DA120 $\pm 100\mu\text{m}/\text{m}$



### Description

Thanks to its closed construction, the DA120 strain sensor is suitable for measuring strain and force on machine elements and components in harsh environments.

Easy installation by screwing on with 4 M6 screws. Mechanical strain on the component is transferred to the strain sensor using via 4 fixing screws and is transformed into an electrical output signal.

Example applications include force monitoring level measurement.

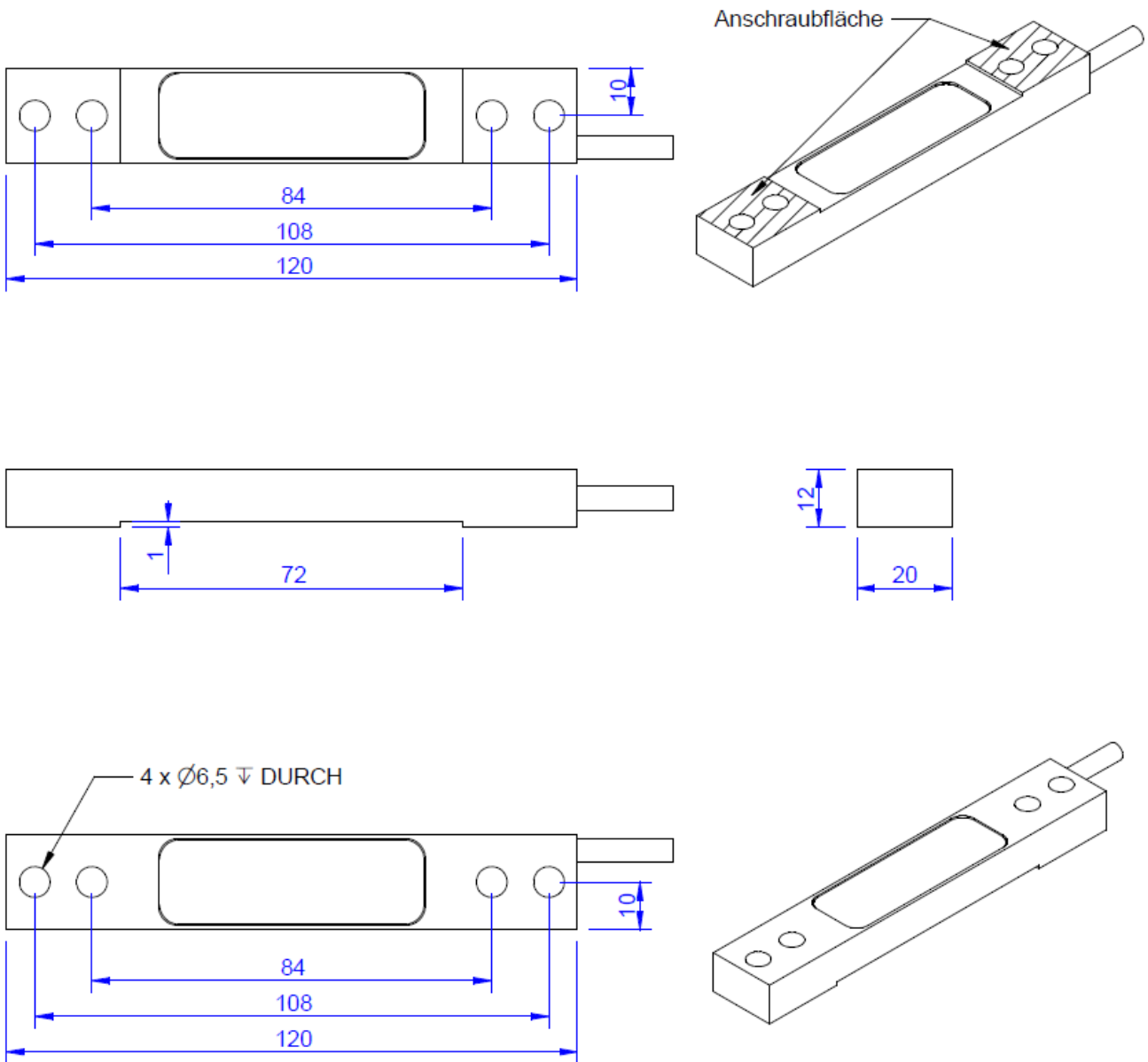
Output signal, thermal behaviour and transmission ratio depend on the geometry and combination of materials. Therefore, calibration is performed by applying of a force.

The "DA120e" strain sensor includes an integrated GSV-15L measuring amplifier. The measuring amplifier has a voltage- or current output and a threshold value output. Amplification, zero point and threshold value can each be programmed via a digital input.

The Strain sensor is applied for the measurements of load. Application fields are machines, buildings, vehicles, container and silos.

The Strain sensor is fastened with 4 screws M6 on the constructional element. The strain on the surface is transmitted to the strain sensor by "force-fit".

## Dimensions





## Technical Data

### Basis Data

|                  |                     |
|------------------|---------------------|
| Type             | Dehnhgtaufnehmer    |
| Nominal strain   | 100 $\mu\text{m/m}$ |
| Operating strain | 400 $\mu\text{m/m}$ |
| Material         | Tool steel          |
| Surface          | electrogalvanized   |

### Elektrische Daten

|   |                    |
|---|--------------------|
| Input resistance                        | 350 $\Omega$       |
| Tolerance input resistance              | 1 $\Omega$         |
| Output resistance                       | 350 $\Omega$       |
| Tolerance output resistance             | 1 $\Omega$         |
| Insulation resistance                   | 5 $\text{G}\Omega$ |
| Rated range of excitation voltage f     | 2.5 ... 5 V        |
| Operating range of excitation voltage f | 2.5 ... 10 V       |
| characteristic value range min          | 0.4 mV/V           |
| characteristic value range max          | 0.5 mV/V           |

### Precision

|                |      |
|----------------|------|
| Accuracy class | 0,5% |
|----------------|------|

### Connection Data

|                        |                                |
|------------------------|--------------------------------|
| Connection type        | 4 conductor open               |
| Name of the connection | Unitronic FD CP Plus<br>4x0,14 |
| Cable length           | 5 m                            |



## Pin Configuration

| Symbol | Description            | Wire colour |
|--------|------------------------|-------------|
| +Us    | positive bridge supply | brown       |
| -Us    | negative bridge supply | white       |
| +Ud    | positive bridge output | green       |
| -Ud    | negative bridge output | yellow      |

*Pressure load: positive output signal.*

*Shield- transparent.*