

## DA90 ±100



### Description

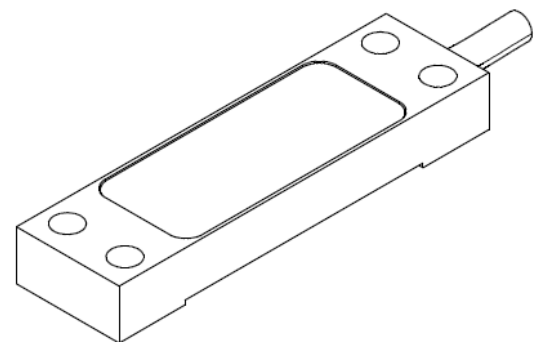
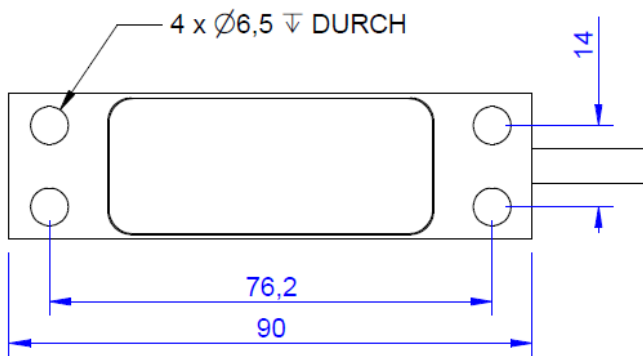
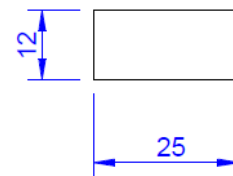
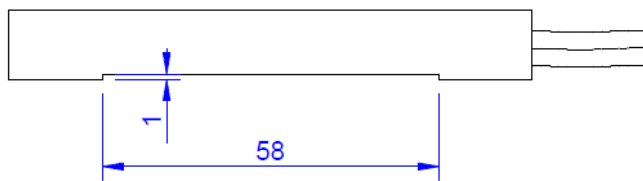
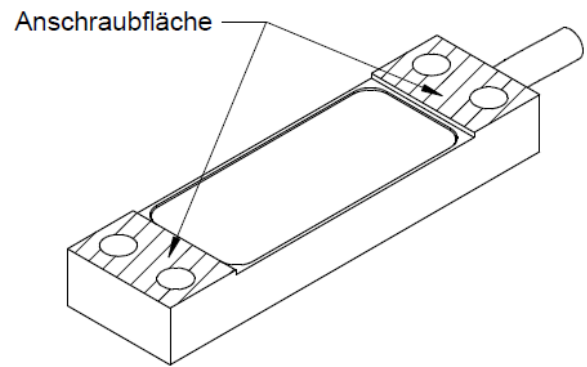
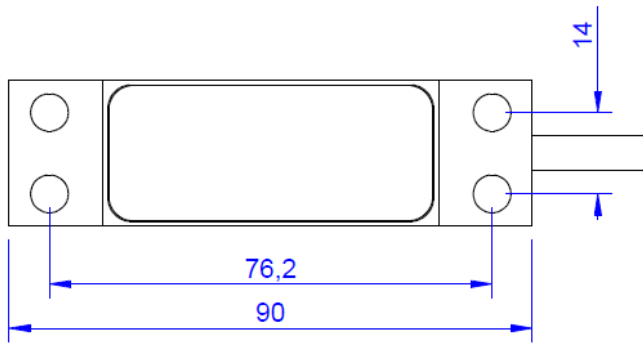
Thanks to its closed construction and stainless steel design, the DA90 strain sensor is suitable for measuring strain and force on machine elements and components in harsh environments.

The strain sensor must be screwed with 4 bolts M6. Example applications include force supervision, fill level measurement and strain analysis on steel components. Mechanical strain on the component is transferred to the strain sensor using forced closure via the 4 fixing screws and transformed into an electrical output signal.

Output signal and thermal behaviour and transmission ratio depend on the geometry and combination of materials of the strain sensor and component. Therefore, the sensor is calibrated by subjecting the component to a certain degree of force.

The DA90e strain sensor contains a 0...10V or 4...20mA measuring amplifier with zero-setting and scale function, as well as threshold value output.

### Dimensions



## Technical Data

### Electrical Data

|   |                       |
|---|-----------------------|
| Input resistance                        | 350 Ohm               |
| Tolerance input resistance              | 1 Ohm                 |
| Output resistance                       | 350 Ohm               |
| Tolerance output resistance             | 1 Ohm                 |
| Insulation resistance                   | 5x10 <sup>9</sup> Ohm |
| Rated range of excitation voltage f     | 2.5 ... 5 V           |
| Operating range of excitation voltage f | 1 ... 10 V            |
| characteristic value range min          | 0.3 mV/V              |
| characteristic value range max          | 0.4 mV/V              |

### Precision

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

### Connection Data

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

### Basis Data

|                  |                   |
|------------------|-------------------|
| Type             | Dehnungsaufnehmer |
| Nominal strain   | 100 µm/m          |
| Operating strain | 400 µm/m          |
| Material         | Tool steel        |
| Surface          | electrogalvanized |





## 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.*

## accessories

| Description   | Description  |
|---|--------------|
|  | Aktivator-11 |
|  | Loxeal-8521  |

Spray 200ml;  
Activator solvent-based for anaerobic adhesives;

Retainer anaerobic for DA70, DA90, DA120, high-strength;  
-55°C ...+ 150°C;