

DA120e $\pm 100\mu\text{m}/\text{m}$



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.

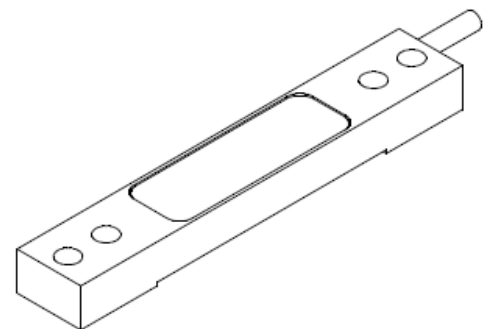
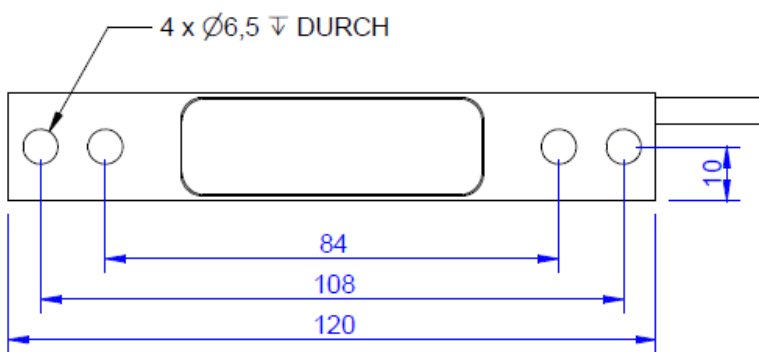
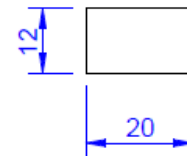
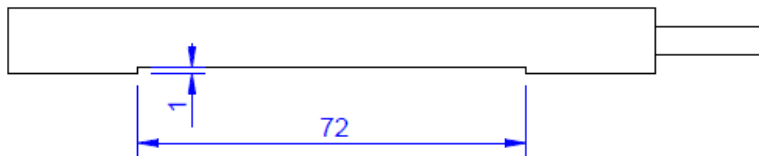
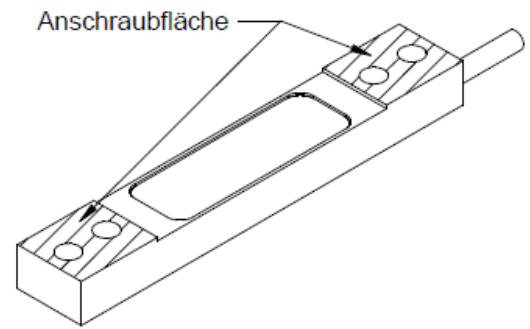
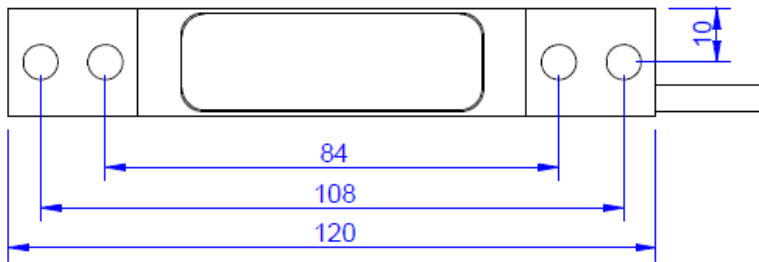
Example applications include force monitoring level measurement.

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 Strain sensor DA120e is implemented for the measurement of loads. Application areas are machines, buildings, vehicles, containers and silos. The strain sensor must be fastened with 4 bolts M6. The strain on the surface of the constructional element is measured by the strain sensor due to the bolted-assembly.

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.

Dimensions



Technical Data

Basis Data

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

Electrical Data

Input resistance	350 Ohm
Tolerance input resistance	1 Ohm
Output resistance	350 Ohm
Tolerance output resistance	1 Ohm
Insulation resistance	5 GOhm
Rated range of excitation voltage f	2.5 ... 5 V
Operating range of excitation voltage f	2.5 ... 10 V

Precision

Accuracy class	0,5%
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Supply

Supply voltage f	14 ... 30 V
Current consumption from	15 mA

Connection Data

Connection type	7-Leiter offen
Name of the connection	Unitronic FD CP Plus 7x0,14
Cable length	5 m

Measuring frequency

Data frequency f	5 ... 105 Hz
Sampling frequency	105 Hz



Pin Configuration

Symbol	Description	Wire colour	PIN
Ub	Supply voltage (24V or 12V DC)	brown	1
GND	Connect ground, supply voltage	white	2
Ua	Output signal 4...20mA / 0...10V / $\pm 10V$	green	3
Tara	Control input for zero balance	yellow	4
Scale	Control input for amplification factor	grey	5
SW	Threshold output	pink	6
GND	Connect ground, signal	blue	7
	shiled (is not connected with the housing)	transparent	

With integrated electronics GSV-15L / GSV-6L.

Ground signal connected to ground supply internally.

accessories

Description	Description
 Aktivator-11	Spray 200ml; Activator solvent-based for anaerobic adhesives;
 Loxeal-8521	Retainer anaerobic for DA70, DA90, DA120, high-strength; -55°C ...+ 150°C;