

DA90



Description

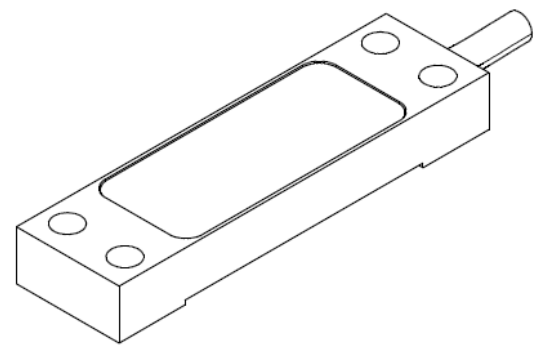
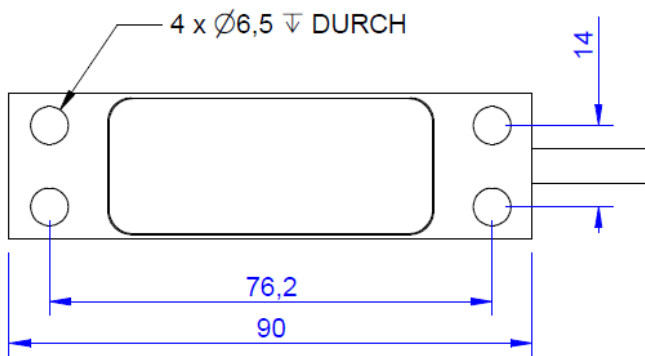
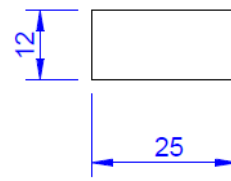
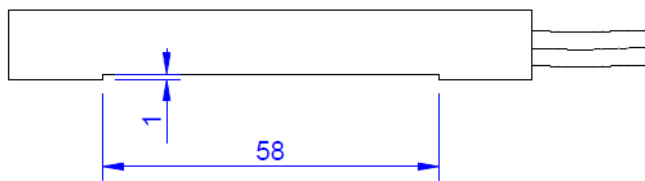
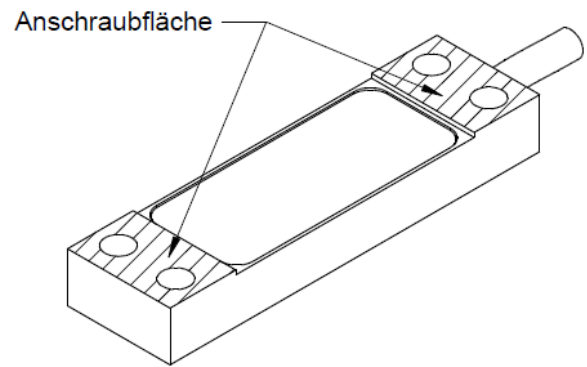
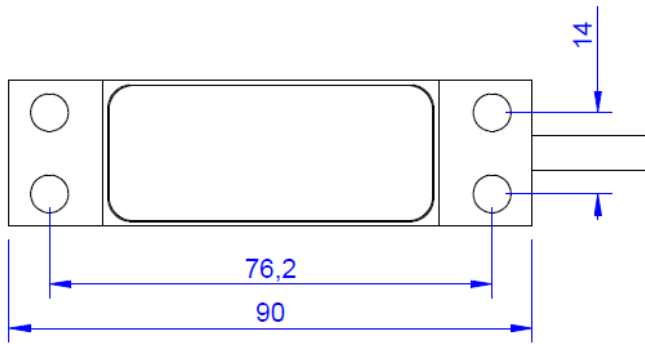
Thanks to its closed construction and stainless steel design, the DA90 strain sensor is suitable for measuring strain and force on machine elements and components in harsh environments.

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 - version non-amplifiée

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	1 ... 10 V
characteristic value range min	0.3 mV/V
characteristic value range max	0.4 mV/V

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

Technical Data - Version 4-20 mA

Electrical Data

Input resistance	350	Ohm
Tolerance input resistance	1	Ohm
Insulation resistance	5	GOhm

Output analog

Current output f	4 ... 20	mA
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Measuring frequency

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

Supply

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

Connection Data

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

Basis Data

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

Technical Data - Version 4-20 mA - Offset 12mA

Electrical Data

Input resistance	350	Ohm
Tolerance input resistance	1	Ohm
Insulation resistance	5	GOhm

Output analog

Current output f	4 ... 20	mA
Zero adjustment to	12	mA

Measuring frequency

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

Supply

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

Connection Data

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

Basis Data

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

Technical Data - Version 0-10 VDC

Electrical Data

Input resistance	350	Ohm
Tolerance input resistance	1	Ohm
Insulation resistance	5	GOhm

Output analog

Voltage output f	0 ... 10	V
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Measuring frequency

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

Supply

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

Connection Data

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

Basis Data

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

Technical Data - Version 0-10VDC - Offset 5V

Electrical Data

Input resistance	350	Ohm
Tolerance input resistance	1	Ohm
Insulation resistance	5	GOhm

Output analog

Voltage output f	0 ... 10	V
Zero adjustment to	5	V

Measuring frequency

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

Supply

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

Connection Data

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

Basis Data

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

Technical Data - Version 4-20 mA - Bande passante 0-25 kHz

Electrical Data

Input resistance	350	Ohm
Tolerance input resistance	1	Ohm
Output resistance	350	Ohm
Tolerance output resistance	1	Ohm
Insulation resistance	5	GOhm

Output analog

Current output f	4 ... 20	mA
Zero adjustment to	4	mA

Measuring frequency

Data frequency f	10 ... 25	Hz
Sampling frequency	50	kHz

Supply

Supply voltage f	9 ... 29	V
Current consumption from	22	mA

Connection Data

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

Basis Data

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

Technical Data - Version 4-20 mA - Offset 12 mA - Bande passante 0-25 kHz

Electrical Data

Input resistance	350	Ohm
Tolerance input resistance	1	Ohm
Output resistance	350	Ohm
Tolerance output resistance	1	Ohm
Insulation resistance	5	GOhm

Output analog

Current output f	4 ... 20	mA
Zero adjustment to	12	mA

Measuring frequency

Data frequency f	10 ... 25	Hz
Sampling frequency	50	kHz

Supply

Supply voltage f	9 ... 29	V
Current consumption from	22	mA

Connection Data

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

Basis Data

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

Technical Data - Version -10/+10VDC - Bande passante 0-25 kHz

Electrical Data

Input resistance	350	Ohm
Tolerance input resistance	1	Ohm
Output resistance	350	Ohm
Tolerance output resistance	1	Ohm
Insulation resistance	5	GOhm

Output analog

Voltage output f	-10 ... 10	V
Zero adjustment to	0	V

Measuring frequency

Data frequency f	10 ... 25	Hz
Sampling frequency	50	kHz

Supply

Supply voltage f	9 ... 29	V
Current consumption from	22	mA

Connection Data

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

Basis Data

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

Technical Data - Version -10/+10V - Bande passante 0-25 kHz

Electrical Data

Input resistance	350	Ohm
Tolerance input resistance	1	Ohm
Output resistance	350	Ohm
Tolerance output resistance	1	Ohm
Insulation resistance	5	GOhm

Output analog

Voltage output f	-10 ... 10	V
Zero adjustment to	5	V

Measuring frequency

Data frequency f	10 ... 25	Hz
Sampling frequency	50	kHz

Supply

Supply voltage f	9 ... 29	V
Current consumption from	22	mA

Connection Data

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

Basis Data

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




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;
 Configuration GSV-6	as a free service we offer the configuration for GSV-6K and GSV-6L, setting parameters are selectable