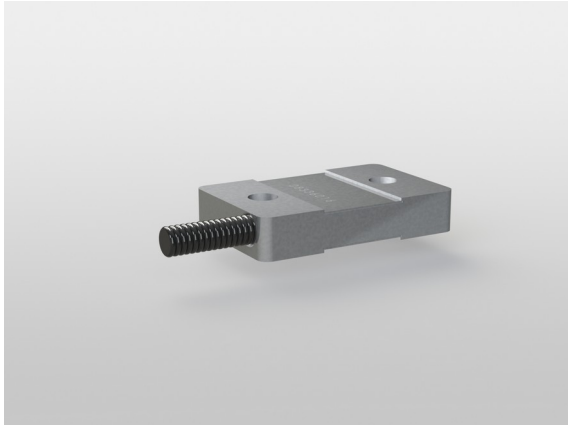


Strain Sensor DA70e 010

Item number: 3955



The strain sensor DA70 is suitable for strain and force measurement on machine elements under rough conditions.

Installation is done quite simply by screwing the sensor with 2 screws M10 on an even material surface.

The connection cable is protected by a non-crushable spiral tube. The strain on the surface of the constructional element is measured by the strain sensor due to the bolted-assembly. The areas of application are, for example, force monitoring in agricultural and construction machinery, fill level measurement and strain data acquisition on machine elements.

The temperature behavior and conversion factor depend on the geometrical and material pairing of sensor and component. The sensor is calibrated by subjecting the component to a known force.

The DA 70 is also available with integrated evaluation electronics.

The integrated electronic GSV-15L provides an output signal 4...20 mA proportional to the applied force on the constructional element. The electronic GSV-15L offers a digital input for automatic zero adjustment, a digital input for autoscale and a digital output as threshold switch.

Technical Data

Basic Data		Unit
Type	Dehnungsaufnehmer	
Nominal strain	300	µm/m
Operating strain	150	%Fn
Material	tool steel	
Surface	electrogalvanized	
Dimensions	78mm x 40mm x 17mm	

Electrical Data		Unit
Input resistance	400	Ohm
Tolerance input resistance	60	Ohm
Insulation resistance	5	GOhm
Rated range of excitation voltage from	2.5	V
Rated range of excitation voltage to	5	V
Operating range of excitation voltage from	1	V
Operating range of excitation voltage to	10	V

Accuracy Data		Unit
Relative linearity error	1	%v.S.
Relative zero signal hysteresis	5	%Fn
Temperature effect on zero signal	0.5	%Fn/10K
Temperature effect on characteristic value	1	%Fn/10K
Relative creep	1	%Sn
Analog Output		Unit
Number of analog outputs	1	
Voltage output from	0	V
Voltage output to	10	V
Zero adjustment to	0	V
Measuring Frequency		Unit
Data frequency from	5	Hz
Data frequency to	105	Hz
Sampling frequency	105	Hz
Supply		Unit
Supply voltage from	14	V
Supply voltage to	30	V
Current consumption from	15	mA
Strain gauge bridge supply	5	V

Environmental Data		Unit
Rated temperature range from	-10	°C
Rated temperature range to	85	°C
Operating temperature range from	-40	°C
Operating temperature range to	85	°C
Storage temperature range from	-20	°C
Storage temperature range to	85	°C
Environmental protection	IP65	

Strain gauge is used with k-factor = 2.

Pin assignment

Channel	Symbol	Description	Wire color	PIN
	Ub	Supply voltage (24V or 12V DC)	brown	1
	GND	Connect ground, supply voltage	white	2
	Ua	Output signal 4...20mA / 0...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.