Strain Sensor DA54-tiewrap PUR/10S/140

Item number: 3183



The strain sensors DA54-mag, DA54-tiewrap are suitable for high-resolution detection of forces and deformation of structural works such as bridges, silo legs, offshore wind farms, railway lines, etc.
With these models in an anodised aluminium housing, the same performance features are achieved as when applying strain gauges (DMS) directly. These features include a high resolution, very low drift effects and the options for both static and dynamic measurement.
The strain sensor includes a completely wired DMS that is pressed onto the component by a specially formed pressing mechanism when screwing on the extension sensor. An integrated seal provides an initial layer of protection against dust and damp. Depending on the planned duration of use, measures to protect against damp, such as waterproofing the joints with silicone, encapsulation with additional surrounding hoods, etc. are applied after installation.
Unlike strain sensors DA40 and DA54, the pressure strength is generated by integrated high-performance magnets or cable ties. Time-consuming drilling of threads is not required as a result.
The strain sensors are equipped with different strain gauges depending on the application. Type FAE4 and FAED4 full bridges and FAET and FAED half bridges or FAE single grids are used.

Optional special version

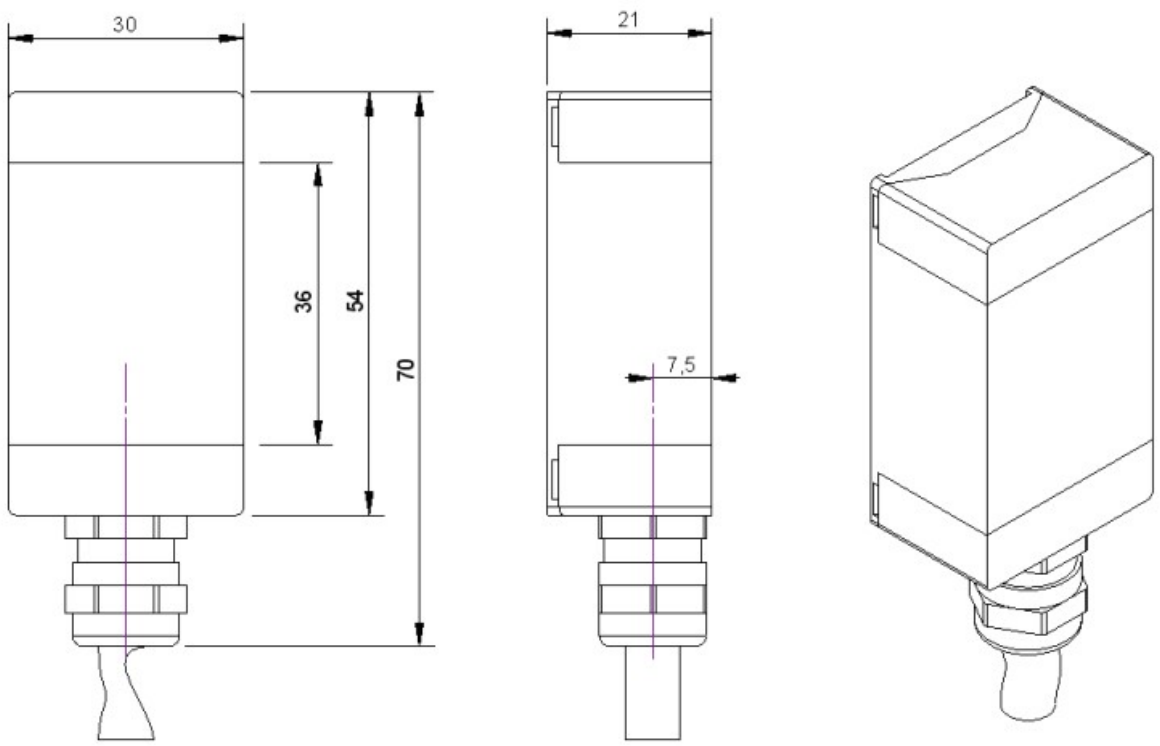
- Protection class IP68: from rated force 200 N
- Pressure range up to 8 bar

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Stand: 27.08.2026

Technical Drawing



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Technical Data

Basic Data		Unit
Type	Dehnungsaufnehmer	
Nominal strain	1300	µm/m
Operating strain	150	%Fn
Dimensions	30mm x 54mm x 21mm	

Electrical Data		Unit
Input resistance	350	Ohm
Tolerance input resistance	7	±
Output resistance	350	Ohm
Tolerance output resistance	7	±
Insulation resistance	5x10^9	Ohm
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	5	V
Zero signal	2	mV/V

Accuracy Data		Unit
Temperature effect on zero signal	0.005	mV/V/10K
Temperature effect on characteristic value	1	%v.S./10K

Strain gauge is used with k-factor = 2.

Pin assignment

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Channel	Symbol	Description	Wire color	PIN
	+Us	positive bridge supply	brown	
	-Us	negative bridge supply	white	
	+Ud	positive bridge output	green	
	-Ud	negative bridge output	yellow	

Screen - transparent. Pressure load: positive output signal

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