

Strain Monitor Type KL66-S



Strain Monitor KL66-S is used as a force and deformation monitoring element for all types of structures

General

As in all DIGI SENS transducers, an oscillating-wire sensor is used to convert the force/load into an electrical signal. This patented element is able to deliver a signal that can be directly processed by a computer.

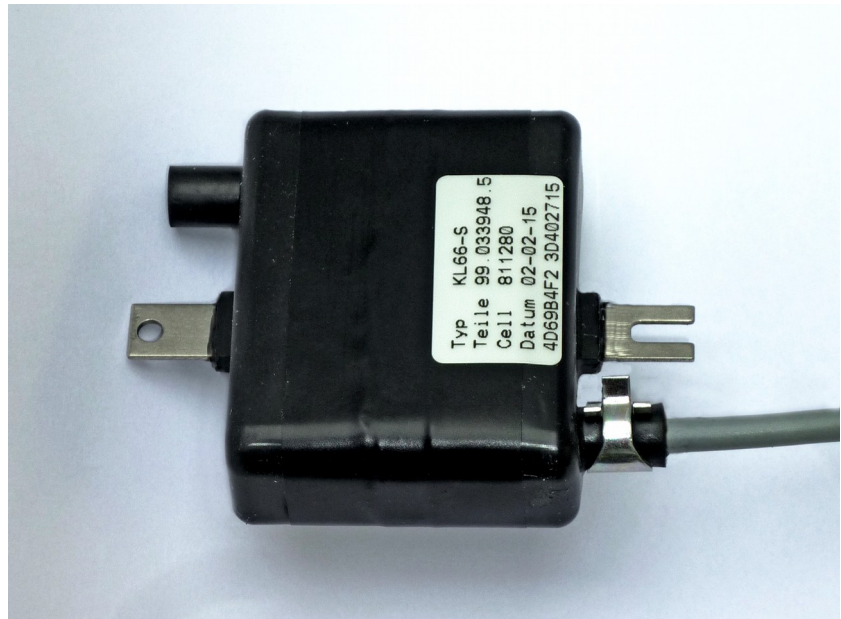
Application

Surveying the stress of any kind of structure like bridges, cranes, machines or tanks. Overload protection for elevators, platform, robots, vehicles, etc.

Description

The Strain Monitor KL66-S is threaded on the structure to be surveyed and allows a precise and reproducible measurement of its stress changes.

Using DIGI SENS vibrating wire technology instead of a strain gauge, means having a simple mechanical mounting combined with a very accurate measurement.



This technology also offers an extremely high resolution.

Deformations of fractions of a $\mu\epsilon$ can be measured.

Since the KL66-S is adapted to the material of the structure to be surveyed, differential thermal expansion has no negative influence on the precision.

The DIGI SENS technology is also standing for a very good long-term stability. Since no organic material is involved in the measurement chain, creeping or other influences are reduced to the minimum.

The KL66-S delivers a 5V-TTL frequency signal,

proportional to the displacement measured. The frequency is a square root function of the displacement. In most applications it can be considered linear.

This frequency signal is easy to transmit, immune to perturbations and can be treated directly by any processor.

Fit and function

No special tooling is needed. No surface conditioning, no glues drying in clean room condition. No maintenance is needed.

Just tighten the screw and you are ready to measure.

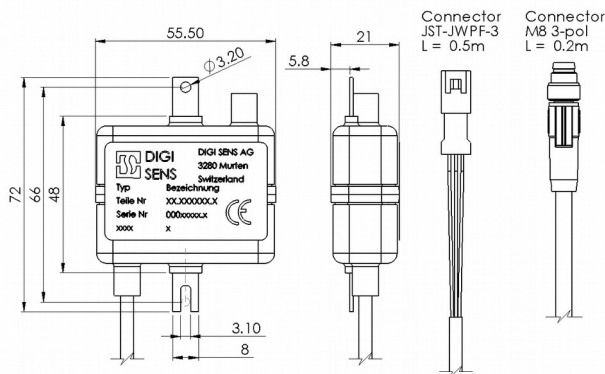
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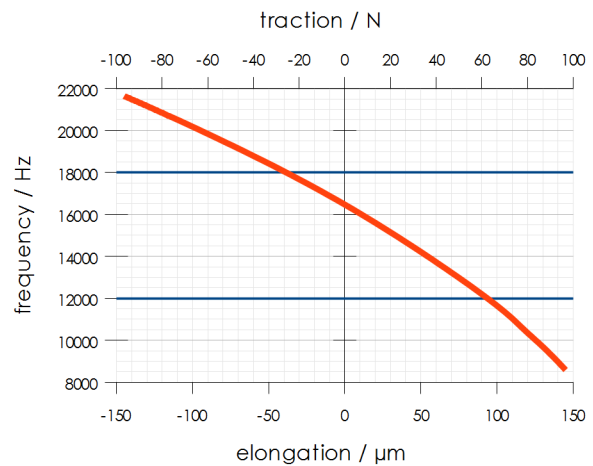
Technical Data

1. Technical specification				
Length	72 mm	Functional temperature range	-10 to + 70°C	2. Cable Type AWM 2464 Length 0.5 m with JST 0.2 m with M8 Conductors 3 Cable Connection: (TTL-compatible) JST: (1) white, ground (2) brow, power supply (3) green, string frequency M8: (1) power supply (2) string frequency Bending radius 15x diameter of cable 3. Standards residential: EN 61000-6-1 and -3 industrial: EN 61000-6-2 and -4 4. Delivery Condition: <ul style="list-style-type: none"> Fitting Instruction Fitting Accessories
Width	55.5 mm	Temperature drift of zero	typical 0.5 Hz/°K	
Height	21 mm	Temperature influence on span	typical 0.1%/10°K	
Weight (without cable)	60 g	Vibration sensitivity	According to IEC 68-2-34	
Housing	IP64 (with cover IP66)	Shock resistance	According to IEC 68-2-34	
Power supply	3 – 5 V DC	Hysteresis (for ideal structure)	=2 f.s.d. Hz	
Nominal	5 mA(max.10 mA)	Reproducibility (for ideal structure)	=2 f.s.d. Hz	
Elongation nominal	+90 / -45 µm	Relative Air Humidity	≤98% not condensing	
Elongation overload	+135 / -120 µm	Pollution degree	2	
Traction nominal	+60 / -30 N			
Traction overload	+90 / -80 N			
Signal	12000-18000 Hz (5 V TTL)			
Overload range	9000-21000 Hz (5 V TTL)			
Base frequency	16500 Hz ±500 Hz			
Sensitivity	~4 Hz / µε @ 12 kHz ~2 Hz / µε @ 18 kHz			

Dimensional drawing



Characteristic (typical)



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