Strain Link Transducer
DKA-45

VELOMAT MESSELEKTRONIK

description

The DKA-45 is a robust strain link transducer that can be attached to ist base by screws. The device can be used for measuring the strength and the extension of machine elements and components in a rough environment.

The installation is most simple by merely mounting the sensor with two M10 bolts to a plain surface of the material. The connection cable is protected by a kick firm spiroband.

The device can be used for monitoring forces at country and building machines, metering the filling level and recording the extension at machine elements. The temperature behaviours and translation factor are dependent on geometry and material mating of sensor and component.

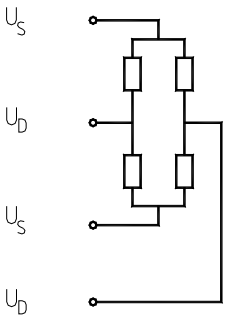
The calibration of the sensor is made by applying of the component with known strength. The DKA-45 are or also with an external amplifier for 1 and 9 mA or 4 and 20 mA output current available optional.

By a suitable choice of the zero point in the unloaded state the recording of extension, compression or both is possible. Being able to into combination with different comparators to trigger switching processes by thresholds eligible for office.

The following further features are for indicating the there DKA-45:
passive surface strain sensor with full bridge, for cyclical applications, suitable for strain measurements on rigid structures, sensor exchange w/o recalibration.

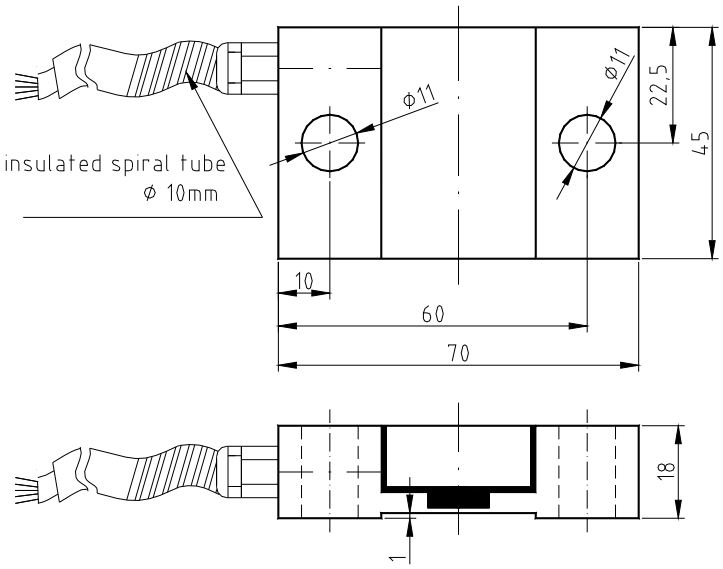
VELOMAT Messelektronik GmbH . Schwarzer Weg 23b . D-01917 Kamenz Telefon (03578) 3749-0 . Telefax (03578) 3749-14

specification



U_S : strap voltage

U_D : strap output



mechanical execution

sensor	tension / compression
length x width x height	70 mm x 45 mm x 18 mm
mounting screws	2 x ∅ 11 mm distance 50 mm / 2 x M10 strength class 12,9
material	Ck45, galvanized
environmental protection	IP 67

electrical execution

nominal extension	±750 µm / m
nominal index (output)	±1 mV / V
accuracy class	0,2
excess load factor	150 %
transmission ratio	≈ 2 bis 3
thermal extension coefficient	≈ 13 x 10^{-6} 1 / K
operating temperature range	0 °C to +80 °C
zero signal (output)	in accordance with the mating of material
input resistance	1.000 Ω or 350 Ω full bridge (option)
output resistance	1.000 Ω or 350 Ω (option)
insulation resistance	> 5 x 10^{9} Ω
connection technique	4 circuit
linearity	< 0,4 % FS
hysteresis	< 0,4 % FS
repeatability	< 0,1 FS (cycle to cycle)
bridge excitation by 1.000 Ω	max. 18 V
bridge excitation by 350 Ω	max. 12 V

connection

electrical connections

2 m LiYCY 4 x 0,14 mm^2

brown	strap voltage Us+
white	strap voltage Us-
green	strap output UD+
yellow	strap output UD-
blue	protection