

Clip Gauge DA-01

article-no: VX34020352
serial-no: key part-no.



description

The clip gauge DA-01 is made of galvanised stainless steel in a closed construction. It is applicable for strain and force measurements under rough environmental conditions.

The installation is carried out simply by screwing the sensor with four M8 screws on a planar material surface. Direct application and adjustment of the strain gauges is not necessary.

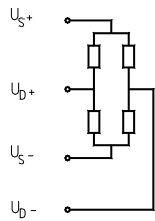
Examples of application are monitoring of forces, level measurement and recording the extension of building components made of steel and aluminum.

The signal, the temperature behavior and the transmission ratio depend in principle on both the geometry and the material mating of sensor and component.

Calibration of the sensor can be performed best by applying a known force to the component under normal operating conditions.

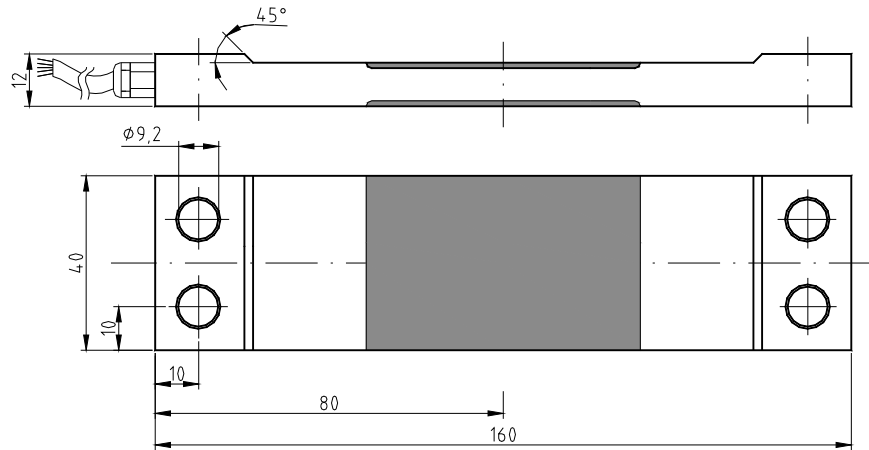
The cable screen is connected to the sensor.

specification



U_s : Brückenspannung

U_b : Brückenausgang



mechanical execution

diameter and mounting see assembly drawing

weight	approx. 0,83 kg
material	heat-treated steel zinc-plated; cover = plastic
degree of protection	IP 67
nominal measuring range	approx. $\pm 300 \mu\text{m} / \text{m}$ (strain / compression)
overload capability	150 % of nominal measuring range
transformation factor	approx. 4

electrical execution

output signal	approx. 1,3 mV / V at nominal strain
zero signal	according to matching of geometry and material plus bolting torque during fixing
thermal expansion coefficient	approx. $13 \times 10^{-6} 1 / \text{K}$
measuring principle	wheatstone full bridge of strain gauges
input / output resistance	350 Ω / 350 Ω
excitation voltage	max. 12 V AC / DC
current consumption	max. 35 mA
insulation resistance	> 5.000 M Ω
nominal temperature range	-15 °C to +70 °C
operating temperature range	-25 °C to +80 °C**

cable and connection

cable length / cable type	5 m LiYCY 4 x 0,14 mm ²										
cable end	wire-end-sleeve										
wiring connections	<table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">brown</td> <td>excitation voltage U_{s+} / $B+$</td> </tr> <tr> <td>green</td> <td>excitation voltage U_{s-} / $B-$</td> </tr> <tr> <td>yellow</td> <td>signal U_{D+} / $S+$</td> </tr> <tr> <td>white</td> <td>signal U_{D-} / $S-$</td> </tr> <tr> <td>blue</td> <td>shielding (only in the case of a shielded cable)</td> </tr> </table>	brown	excitation voltage U_{s+} / $B+$	green	excitation voltage U_{s-} / $B-$	yellow	signal U_{D+} / $S+$	white	signal U_{D-} / $S-$	blue	shielding (only in the case of a shielded cable)
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white	signal U_{D-} / $S-$										
blue	shielding (only in the case of a shielded cable)										

* These details are depending on the fit, the resistance moment and the installation length. They are reached with favorable values.

** only for the case that the cable is laid with fastening (depending on cable type)

*** This cable should be connected at the operating voltage unless the calibration signal is used. (only applicable to executions with amplifier)