

Force Transducer LBA-120A-1,2/2,5-1.XX



description

The force transducer works according to the strength measuring principle on a transverse basis to the longitudinal axis.

It is suitable for measuring of tension and compression forces.

The LBA-120A is universal usable and find used by the measurement from pulling forces at metal hoist, handling for heavy workpieces and robots.

The LBA-120A consist of a beam shear force transducer, on under- and topside is two equal in size flanged with respective four M10 screw threads. The mounting different flanged is possible.

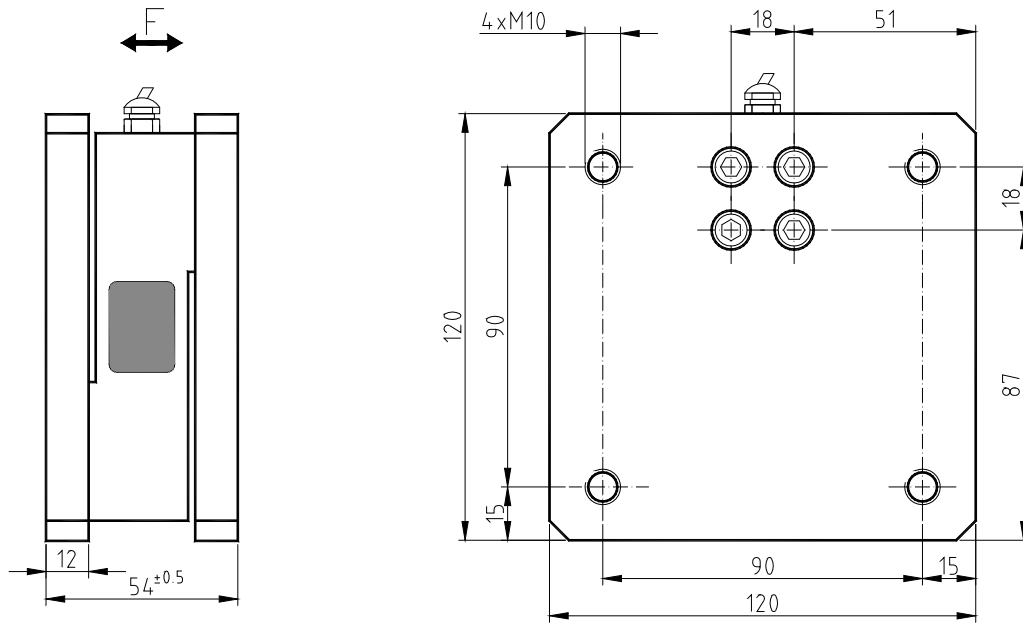
The measuring cell for the strain gauge has been cast with a high-elastic compound and is thus protected against mechanical or chemical damages.

The strain gauge bridges measure the caused deformation in the measuring cell due to the shear forces at the beam. Executions with strap output or amplifier with a measuring signal of 1 - 9 mA or 4 - 20 mA are possible for it.

By application of an amplifier the nominal output current can be produced in the unloaded state by add-ons of the calibrating checking signal (software calibration). A check of the force transducer with the amplifier and the following measuring facilities is possible with that.

The LBA-120A is planned according to execution for the direct connection with an amplifier or a control.

specification



mechanical execution

weight
mounting
material
environmental protection

approx. 1500 g
 flange on both side with 4 screw thread M10
 aluminium
 IP 67

LBA

nominal force
max. use force
rupture force

120-1,2

120 kg
 200 % of the nominal force
 500 % of the nominal force

120-2,5

250 kg
 200 % of the nominal force
 500 % of the nominal force

electrical execution

operating voltage
current consumption
output / measuring signal
calibration in
calibration tolerance
nonlinearity
hysteresis
temperature coeff.
 zp.
 rec.
operating condition

when strap with 350 Ω: max. 12 V AC / DC
 when amplifier: 9 - 30 V DC
 max. 35 mA / 40 mA (according to execution)
 350 Ω / 1 - 9 mA / 4 - 20 mA (options)
 N / kg
 < 0,50 % of the final value*
 < 0,25 % of the final value*
 < 0,15 % of the final value*
 ≤ 0,04 % of the final value / K
 ≤ 0,04 % of the set point / K
 -15 °C to +85 °C**

connection

cable type
electrical connections

1,5 m LiYCY 4 x 0,14 mm² (example)
when **strap / amplifier**
 brown strap voltage U_{s+} / operating voltage
 green strap voltage U_{s-} / GND (ground)
 yellow strap signal U_{o+} / measuring signal output
 white strap signal U_{o-} / calibration signal (low activ)***
 blue protection

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

** in case the laid cable is fixed

*** If the calibration signal is not used, then this cable should be clamped together with the brown wire at the operating voltage.