

# Tensile Force Measuring Head Series M 150, M 350



Head series M 150 is a compact system to measure tensile forces on: cables, belts, profiles, tapes etc. The smooth, in precise ball-bearing running rollers, can be adjusted to the material, which should be measured.

It is not necessary to thread the material.

Press the measuring head only light against the material you like to measure.

Both the outer guide-rollers guide the material in a defined angle over the measuring roller. Due to the deviation, the resulting radial force is measured by the head. It is proportional to the tensile force.

Application: Tensile force measurement on: wires, cables, ropes, profiles etc.

up to 25 mm  $\varnothing$  or material - width

for installation in the machine / labs // or measurement by hand

Characteristics: for measurement:

only light pressing the measuring head against the material you like to measure

Nominal loads: 5 daN, 10 daN, 3 hN, 5 hN, 1 kN, 2 kN, 3 kN

Measuring principle: measuring system = capacitive

the measuring head transforms the, on the measuring-roller active radial-force,

into a proportional electric outputsignal

Roller material: AlCuMqPb, Option: ceramic coated rollers, steel rollers

Materialspeed: up to 1200 m/min.

Dimensions: standard: distance between the outer guide-rollers: 480 mm.

Optional: distance between the outer guide-rollers of 180 mm, 280 mm or 380 mm

are as well available

Option: cylindrical rollers, ceramic coated rollers

Hints: series M 150 needs an external Tensometric amplifier

series M 350 is equiped with a built-in amplifier

M 350 needs a service voltage of  $\,5$  V,  $\,12$  V,  $\,24$  V, or  $\pm$   $\,15$ V

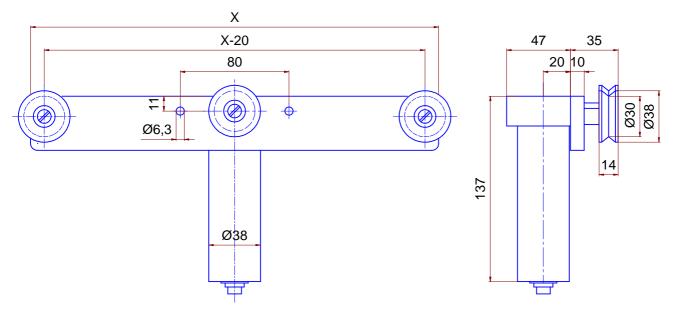
and supplies an analogue output signal 0 - 10 V corresp. 0 - 100  $\%\,$  the nominal load

Accessories available: connection cable, amplifier with or without display



### Technical data:

## Dimensions Tensile Force Measuring Head Series M 150 and M 350



X = according to the design: 200 mm, 300 mm, 400 mm or 500 mm

### M 150

Series M 150 can only be used together with a Tensometric amplifier.

For tension measurement by hand: MINI 710 is necessary.

Nominal loads 5 daN, 10 daN, 3 hN, 5 hN, 1 kN, 2 kN, 3 kN

(1 hN = 10 daN; 1kN = 100 daN)

Measuring range: approx. 5 % to 100 % the nom.load

Error of the meas.system: < 1%

Measuring principle: capacitive

Natural frequency: 150 Hz to 300 Hz acc.to the nom.load

Overload protection: in. 10 times

Angle of contact

around the measuring roller: 3°

Charact.range of temp.:  $10^{\circ}...+35^{\circ}$ Coef.of temp.:  $\pm 0,1 \% / ^{\circ}$ Protection: IP 40

Included in delivery: measuring head, instruction manual

### M 350 (M 150 with built-in amplifier)

Technical data identical with M 150

Service voltage: 5 V, 12 V, 24 V or ± 15V (adjusted from Tensometric)

Output signal: 0 - 10 V, corresponding to 0 - 100 % of the nominal load

Calibration: potentiometer to adjust the electrical zero and the gain
are available at the plug-side, by means of a screw-driver

Volume of delivery: measuring head with connector, instruction manual