Tensile Force Measuring Head Series M 156, M 356

Head series M 156 is a compact system to measure tensile forces on : cables, stranded-wire, wires, tapes etc.

The smooth, in ball-bearing running rollers, can be adjusted to the material, which should be measured.

By means of a light turn, the measuring head can easy be threaded in the running material too.

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.

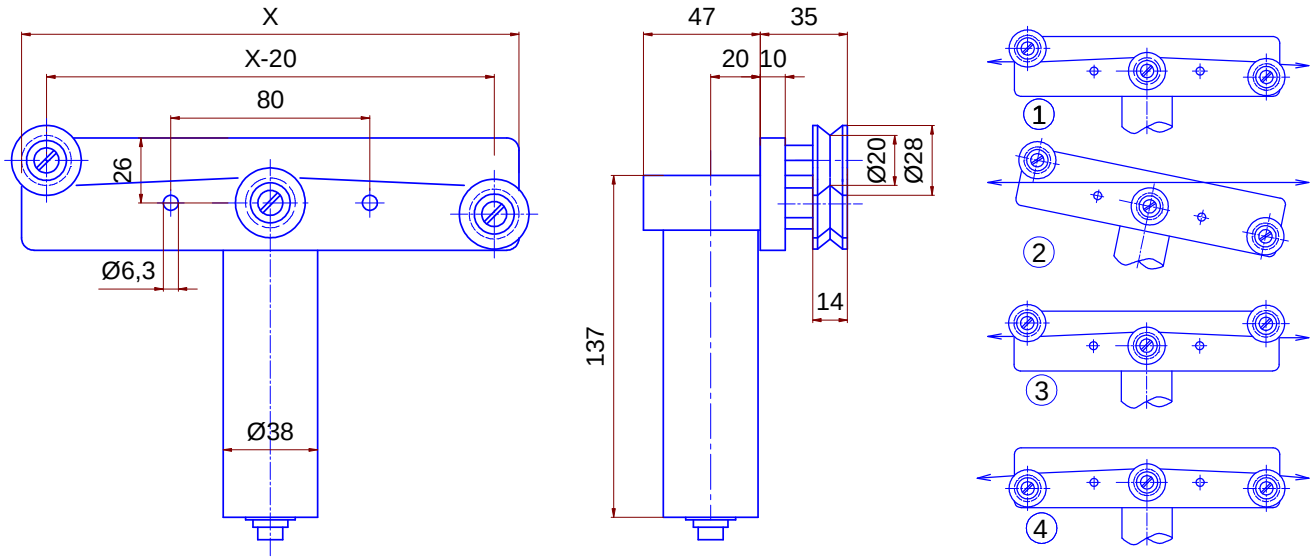
Application:	tensile force measurement on : stranded wire and cable up to ∅ of 2 mm wire up to ∅ of 1 mm for cord, belts etc. using cylindrial rollers up to a width of 25 mm for installation in machines / labs / or measurement by hand
Characteristics:	by changing the 2 outer guide-rollers, 3 various material guidings are possible
Nominal loads:	5 daN, 10 daN, 2 hN, 5 hN, 1 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:	AlCuMgPb, Option: ceramic coated rollers
Materialspeeds:	up to 1200 m/min.
Dimensions:	standard : distance between both the outer guide-rollers : 180 mm. Optional : distance between both the outer guide-rollers : 280 mm (for stiff material)
Option:	cylindrical rollers, ceramic coated rollers
Hints:	series M 156 needs an external Tensometric amplifier series M 356 is equiped with a built-in amplifier M 356 needs a service voltage of 5 V, 12 V, 24 V, or ± 15V and supplies an analog outputsignal 0 - 10 V corresp. 0 - 100 % the nominal load
Accessories available:	connection cable, amplifier with or without display

Technical data :

Tensometric Messtechnik GmbH
Derken 7
D - 42327 Wuppertal

Tel. ++49 (0) 202-7052149-00
Fax .++49 (0) 202-7052149-90
Email: info@tensometric.com
Web:http://www.tensometric.com

Dimensions Tensile Force Measuring Head Series M 156



X = according to the design 200 mm or 300 mm

1) ideal arranged rollers - for measurement by hand
easy threading of the material

2) by means of a light turn of the measuring head,
you reach the measuring position (1)

3) preferential roller-arrangement for installation
no deviation of the normal material run

4) preferential roller-arrangement for installation,
various diameter have no influence to the measurement
- measurement without new calibration -

M 156

Series M 156 can only be used together with a Tensometric amplifier.
For tension measurement by hand : MINI 710 is necessary.

Nominal loads	**5 daN, 10 daN, 2 hN , 5 hN, 1 kN** (1 hN = 10 daN ; 1kN = 100 daN)	*Angle of contact around the measuring roller*	: 6 °
Measuring range	approx. 5 % to 100 % the nom.load	*Charact.range of temp.*	+ 10°...+ 35℃
Error of the meas.system	< 1%	*Coef.of temp.*	< ± 0,1 % / ℃
Measuring principle	capacitive	*Overload protection*	min. 10 times
Natural frequency	150 Hz to 300 Hz acc.to the nom.load	*Protection*	IP 40
Volume of delivery	measuring head, instruction manual		

M 356 (M 156 with built-in amplifier)

Technical data identical with M 156

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	potentiomter to adjust the electrical zero and the gain are availbale at the plug-side, by means of a screw-driver
Volume of delivery	measuring head with connector, instruction manual

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