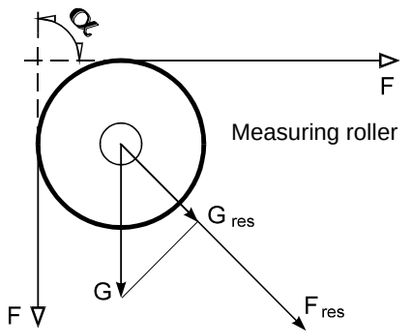
Tensometric Messtechnik GmbH

TECHNICAL INFORMATION

Radial Force Sensor Series M-1355–NH + NH1 and NH2



α = angle of contact
F = tensile force of the material to be measured.
Fres = resulting force which is measured
G = weight of the measuring roller
Gres = part of the -measuring roller weight- in sphere -direction of the sensor

Radial - Force - Sensors of series **M-1355-NHX** are precise and reliable measuring systems, as well high overload-protected as high in long-time-stability.
- Measuring amplifier with analog output from 0 to ± 10V (4-20mA) corresponding to 0 to ± 100% of nominal load
- Adjustment of zero point and amplification (calibration) via laterally installed potentiometers
This signal can be used as actual value for controlling.

For measuring tensile forces on running material, fit a ball-bearing-mounted roller on the journal-bearing.
This measuring roller has to be mounted in a position,
that the material which will be measured, will deviate in a defined angle.
Here angle of contacts, of the material which is measured - around the measuring-roller,
between 3° and 180° are possible. The resulting forces, due to the deviation, are measured by the sensor.
The radial force is proportional to the tensile force, in the material which is measured.
Corresponding to this radial-force the nominal load of the sensor is to select.

Application: measuring tensile forces on running or not running material
p.e: on wires, cables, tapes etc.

Characteristics: extreme space-saving and flat construction, easy mounting
equipped with a standard - journal bearing of ∅ 10x23,5 or 12x25,5 mm.
length and diameter can be adjusted custom-made
realisation the measured data is independent of the width of the used roller.

Nominal loads: 25N, 50N, 100N, 200N, 300N, 600N and 1500N others upon request

Electrical connection: Shielded, fixed cable - standard length 3m or 5m, alternative with M12 connector, other length on request. Shield is connected to housing.

Measuring principle:	Strain-gauge, full-bridge	*Service voltage:*	24V ± 10% < 25mA
Measuring range:	1 % up to min. 120 %	protect*:*	IP 50
Charact. range of temp.:	+5°C ...+60° C		
Coef. of temperature			
- of the zero:	< 0,05% / °C	*Adjusting range zero:*	± 20% of the nom. load
- of the measuring range:	< 0,04 % / °C	*Adjusting range gain:*	± 20% of the nom. load
Error in measurement:	< ± 0,3 %	*Output current max.:*	2 mA
max. error in line. :	< ± 0,2 %	*Output signal:*	0 ± 10V (4-20mA RL max. 500Ω)

Volume of delivery: Instruction manual
Available in addition: measuring head customized rollers.

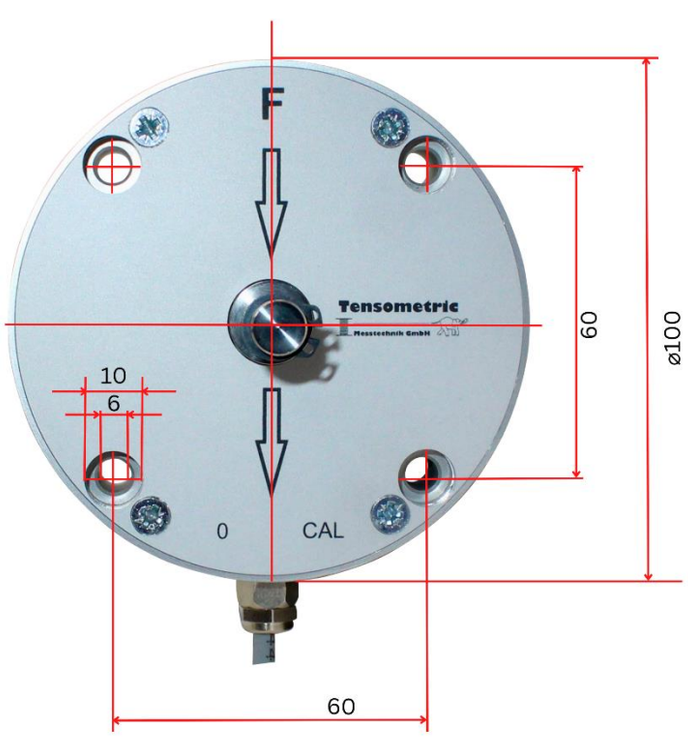
Tensometric-Messtechnik GmbH Web: http://www.tensometric.com

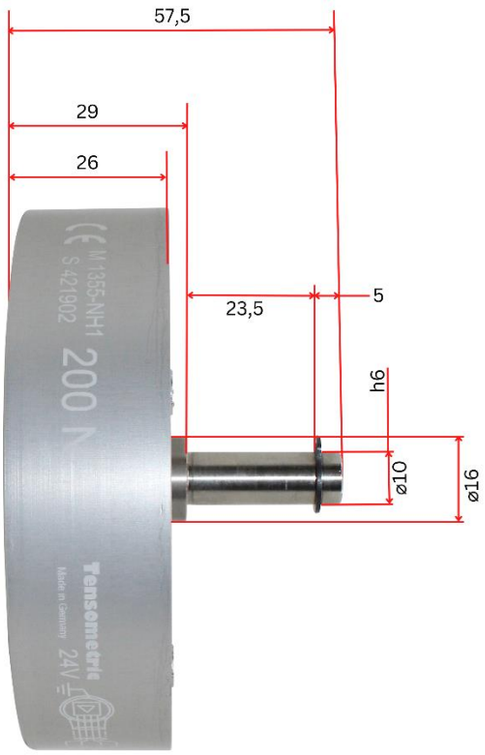
TECHNICAL INFORMATION

amplifier with digital display SA-DMS-621-E or SA-610-DMS-E

Technical data: M-1355-NH & NH1

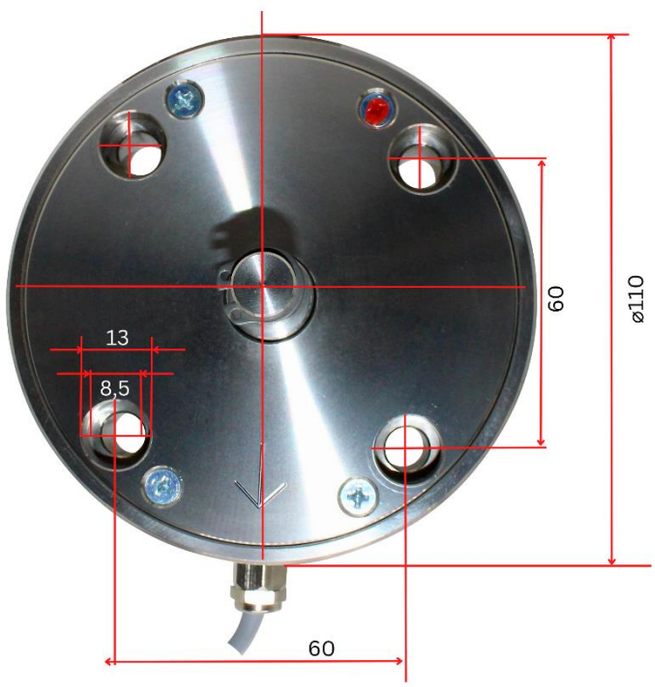
On the model M-1355-NH, the zero and Cal potentiometers are offset by 180°, on the upper side.
Radial Force Sensor
Dimension:

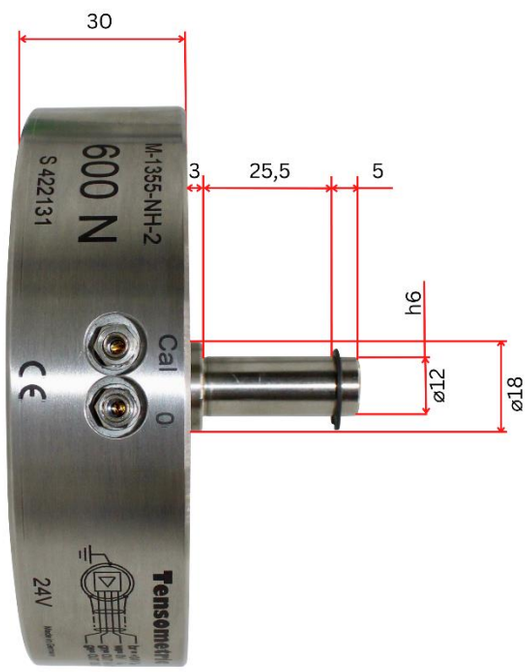




Technical data M-1355-NH2

Dimensions in mm:





Accessories available:

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Web: http://www.tensometric.com

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M1355-NH+NH1-NH2-