Radial Force Sensor Series M 1355 – NH and NH-2

Radial - Force - Sensors of series M 1355 NH are precise and reliable measuring systems, as well high overload-protected as high in long-time-stability.

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. p.e.: range of centrifugal-forces, in rotating stranding machines

Characteristics: extreme space-saving and flat construction, easy mounting equipped with a standard - journal bearing of Ø 10 mm realisation the measured data is independent of the width of the used roller

Nominal loads: 50 N, 100 N, 200 N, 300 N - others upon request

Measuring range: by changing the angle of contact - around the measuring roller - the measuring range is variable

Measuring principle: strain-gage, full-bridge, built in amplifier the sensor transforms the - on the measuring roller - active radial forces into a proportional electric signal

Mounting: 4 screws M 6

Connection: Electrical connection by means of a fixed cable, length 3 m.

Accessories available: Connection cable, amplifier with or without indication, rollers
**Technical data:**

**Radial Force Sensor Series M 1355-NH**

**Dimensions:**

1 = Axle ( journal-bearing )
2 = Seeger ring A10
3 = Connection cable
4 = Loading direction
5 = Potentiometer to adjust the electrical zero ( Offset )
6 = Potentiometer to adjust the gain ( Calibration )
7 = Holes to fix the sensor

Realization the measured data via strain-gages, amplifier is built in.

The desired service voltage must be indicated together with the order.

**Nominal loads:**  50N, 100 N, 300 N - others upon request

**Measuring principle:** strain-gage, full-bridge

**Measuring range:** 1 % up to 115% the nom.load

**Value tolerance:**  < ± 0.2 %

**Overload protection:** 5- times up to 10- times

**Service voltage:**
- 5 V ± 10% < 90 mA
- 12 V ± 10% < 70 mA
- 24 V ± 10% < 30 mA
- ± 15 V ± 10% < +20 mA < -10 mA

**Protection:** IP 50

**Charact.of temperature:** + 5°C ... + 55°C

**Adjusting range zero:** ± 20% of the nom.load

**Adjusting range gain:** ± 20% of the nom.load

**Adjusting the zero** by means of a screw-driver

**Adjusting the gain** by means of a screw driver

**Connection cable:** length 3 m, fix connected

**Delivery:** Sensor with Seegerring A10, Instruction manual

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

Dimensions M 1355- NH-2 :

1 = journal bearing
2 = for Seegerring A12
3 = connection cable
4 = loading - direction
5 = Potentiometer to adjust the electrical zero
6 = Potentiometer to adjust the gain ( calibration )
7 = bore-holes for fixing screws

Realisation the measured data via strain-gages, amplifier is built-in.
The desired service voltage has to be indicated together with the order.

Nominal loads
- 300 N, 500 N, 600N or 1000N -- others upon request

Measuring principle: strain-gage, full-bridge
Measuring range: 1 % up to 115% of the nom.load
Coef. of temperature: < 0,035 % / °C
Max. Error in line: < ± 0, 2 %
- of the zero: < 0,05 % / °C
Overload protection: 5 to 10 times
- of the meas. range: < 0,05 % / °C
Depending the nom.load

Service voltage:
- 5 V ± 10% < 100 mA
- 12 V ± 10% < 70 mA
- 24 V ± 10% < 40 mA
Output signal: 0 ... ± 10V
Output current: max. 2 mA
Option: Output current 4 - 20mA

Protection: IP 50
Character. range of temp.: + 5°C ... + 55°C
Adjusting range zero: ± 20% of the nom.load
Adjusting range calibration: ± 20% of the nom.load

Adjusting the zero:
by means of a screw-driver
Adjusting the gain:
by means of a screw driver

Connection cable:
length 5 m, fix connected
Delivery:
Sensor with Seegerring A12, Instruction manual