

## A 203-Series Force Measuring Sensor

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### Compact Design, Easy Installation

Adaptable in machines with difficult mounting conditions

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### Accuracy Class 0.5 %

Highest accuracy even at low loads

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Nominal Forces 50, 125, 250, 500 and 1000 N

Covers low and medium application range

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### Sensor Body of High Quality Aluminium

Heavy Duty, durable product with long term stability

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#### ● A 203-Series

The A 203-Series Force Measuring Sensors is for use in live shaft roller applications. Their compact design and straightforward mounting concept provide new options in machines with difficult installation conditions.

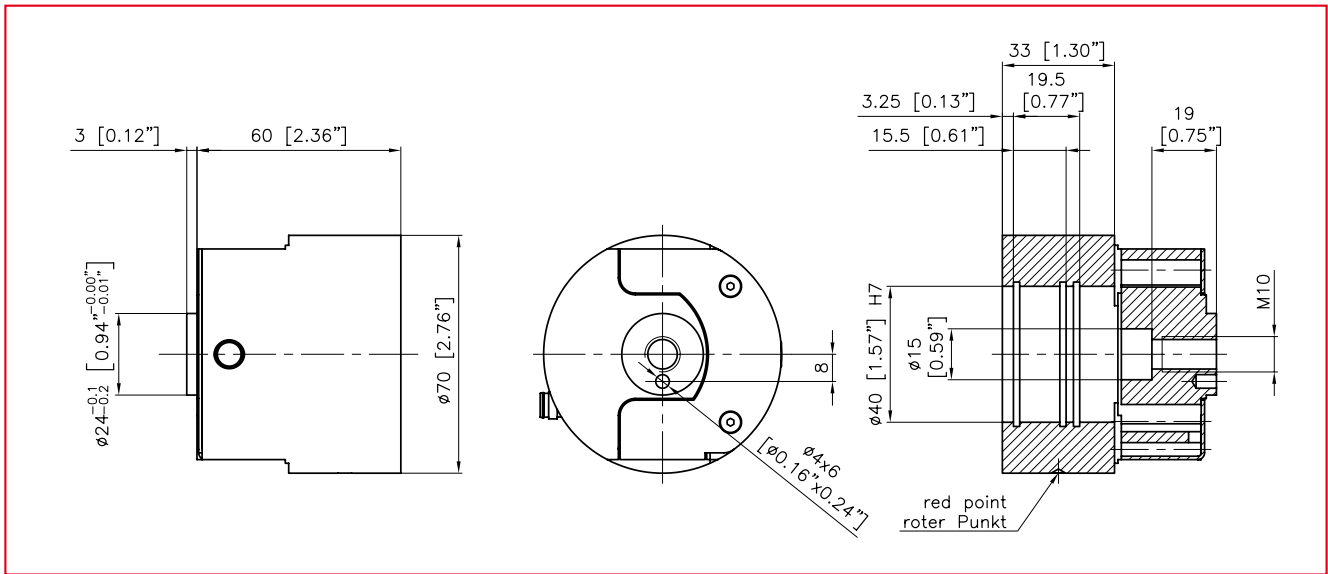
The installation to the machine side frame is simply accomplished with only using a single mounting screw. The red point indicates the positive force measuring direction.

A 203 Sensors ensure highly accurate measuring results with any web material and sizes. Their durability and operational reliability is excellent.

#### ● Functional Description

Foil type strain gauges mounted in a full Wheatstone Bridge configuration in each sensor perform the actual tension measurement. The force values are received in the FMS measuring amplifier for further processing. The dual flexion beam design of this sensor eliminates angular deflection under load and ensures tension measurement with the highest accuracy and reliability. A built in mechanical hard-stop provides high overload protection for operation under the most stringent requirements. The M8 connector enables straightforward wiring with the amplifier. The A 203-Series is compatible with the full line of FMS electronics.

**A 203-Series • Dimensions in mm and [in]**



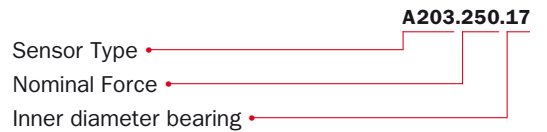
**A 203-Series • Specification**

Sensor Type	Nominal Force N	Nominal Force [lbf]
<b>A 203.50.17</b>	50	11.2
<b>A 203.125.17</b>	125	28.1
<b>A 203.250.17</b>	250	56.2
<b>A 203.500.17</b>	500	112.4
<b>A 203.1000.17</b>	1000	224.8

**A 203-Series • Technical Data**

<b>Sensitivity</b>	1.8 mV / V $\pm$ 2 %
<b>Accuracy Class</b>	$\pm$ 0.5 % ( $F_{nominal}$ )
<b>Temperature Coefficient</b>	$\pm$ 0.1 % / 10 K
<b>Temperature Range</b>	-10...+60 °C [14...140 °F]
<b>Input Resistance</b>	350 $\Omega$
<b>Supply Voltage</b>	1...12 VDC
<b>Protection Class</b>	IP 42
<b>Electrical Connection</b>	M8 Connector
<b>Maximum Overload</b>	10-times rated nominal force
<b>Weight</b>	0.34 kg [0.75 lbs]
<b>Sensor Material</b>	Special aluminium alloy

**Order Code (example):**



**Scope of delivery:**

- 1 Force Sensor, 1 Snap Ring,
- 1 Mounting Screw, 1 Washer

**Not included:**

- Bearings (1203 or 2203), Sensor Cable

**Accessories A 203-Series    Ordering Code**

<b>Sensor Cables with straight connector</b>	50003519 (2 m) 50002729 (5 m) 50003520 (10 m)
<b>Sensor Cables with right angle connector</b>	50003518 (2 m) 50002693 (5 m) 50003485 (10 m)
<b>Bearing 1203</b>	71210035
<b>Bearing 2203</b>	50002632

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