CA 203 Series
Force Measuring Sensor with Dead Shaft Adapter

- **10 times overload protection**
- **No recalibration required**
- **20:1 force measuring range**
- **Wide measuring range at high resolution**
- **Nominal forces 50, 125, 250, 500, 1000, 1500 N**
- **Covers a wide application range**
- **Stainless steel sensor, Aluminium Cover**
- **Corrosion resistant, ultra durable**

**CA 203 Series**
The CA 203 Series is designed as dead shaft Force Measuring Sensors to allow easy roller change in continuous material processing applications. They can be easily mounted to the machine side frame with a single mounting screw or to the top frame utilizing optional mounting brackets. The range adapters covers the most popular shaft diameters. The red point at the connector indicates the positive measuring direction. CA 203 Force Measuring Sensors ensure that even with low material wrap angles and high roller weights, tension will still be measured accurately.

**Functional Description**
Foil type strain gauges mounted in a full Wheatstone Bridge configuration in each sensor perform the actual tension measurement. The dual flexion beam design eliminates angular deflection under load and ensures tension measurement with the highest accuracy and reliability under the most stringent requirements. A built in mechanical hard-stop provides high overload protection and ensures that frequent calibration is not required.
CA 203 Series

Dimensions in mm

Options:

- **PH** = Mounting option with centering pivot
- **H14** = Right angle connector
- **H16** = Temperature range for sensor with PG gland up to 150 °C.
  Connectors up to 120 °C.

Order code (example):

```
CA 203 Series

Journal Specifications

<table>
<thead>
<tr>
<th>Sensor Type</th>
<th>Nominal force (N)</th>
<th>Weight incl. Adapter (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CA 203.50</td>
<td>50</td>
<td>1.690</td>
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<td>CA 203.125</td>
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<td>CA 203.250</td>
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<tr>
<td>CA 203.500</td>
<td>500</td>
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<tr>
<td>CA 203.1000</td>
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<tr>
<td>CA 203.1500</td>
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Adapter Specification

```
<table>
<thead>
<tr>
<th>Inch Adapter Type</th>
<th>Nominal force (inch)</th>
<th>Metric Adapter Type</th>
<th>Connector Type</th>
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</thead>
<tbody>
<tr>
<td>CA 203.DI 100</td>
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<td>CA 203.DM 25</td>
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<td>CA 203.DI 125</td>
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<td>CA 203.DM 30</td>
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<tr>
<td>CA 203.DM 30</td>
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</tr>
</tbody>
</table>
```

Scope of delivery:

- Force measuring sensor, spacer, mounting screws and washers, straight connector.

Technical Data

- Sensitivity: 1.8 mV/V ± 2%
- Accuracy class: ±0.5 % (F<sub>nominal</sub>)
- Temperature coefficient: ±0.1 % / 10K
- Temperature range: −10...+60 °C
- Input resistance: 350 Ω
- Supply voltage: 1...12 VDC
- Maximum overload: 10 times rated nominal force
- Sensor material: Stainless steel sensor, aluminium cover

World Headquarters:

- FMS Force Measuring Systems AG
  Aspstrasse 6
  8154 Oberglatt (Switzerland)
  Phone: +41 44 852 80 80
  Fax: +41 44 850 60 06
  info@fms-technology.com

- FMS USA, Inc.
  2155 Stonington Avenue
  Suite 119
  Hoffman Estates, IL 60169
  Phone: +1 847 519 4400
  Fax: +1 847 519 4401
  fmsusa@fms-technology.com

- FMS UK
  Highfield, Attch Lench Road
  Church Lench
  Evesham WR 11 4UG
  Phone: +44 1386 871023
  Fax: +44 1386 871021
  fmsuk@fms-technology.com

- FMS Italy
  Via Baranzate 67
  20026 Novate Milanese
  Phone: +39 02 39487035
  Fax: +39 02 39487036
  fmsiti@fms-technology.com

www.fms-technology.com