

## 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**

---



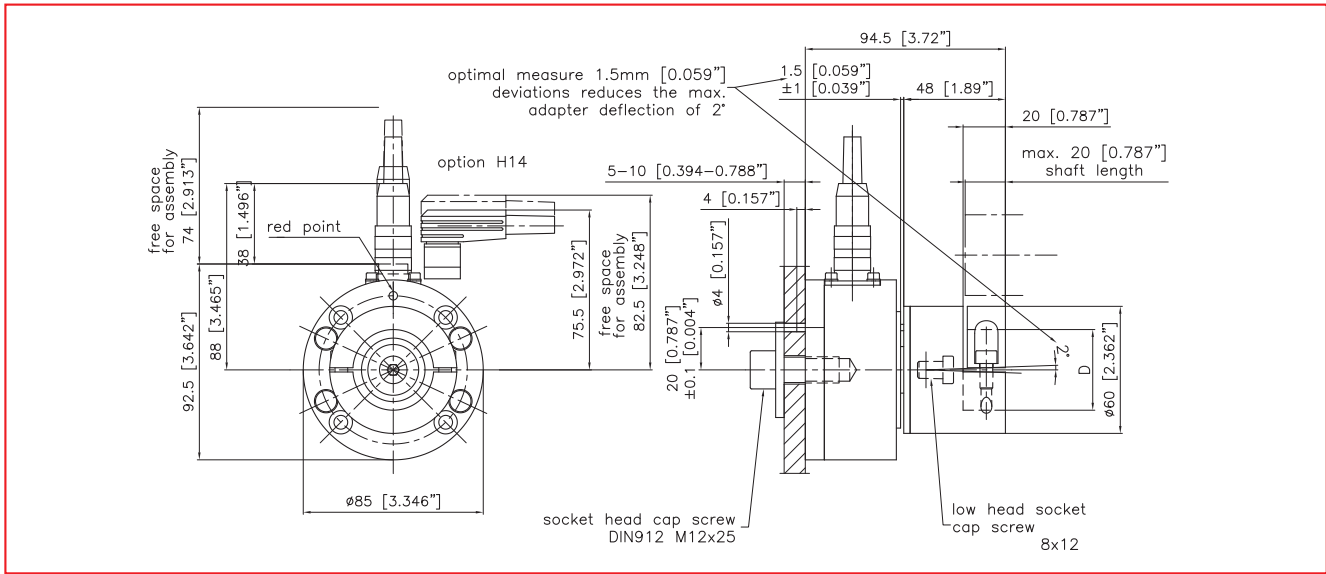
#### ● CA 203 Series

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



CA 203 Series • Journal Specifications

Sensor Type	Nominal force N	Weight incl. Adapter kg
CA 203.50	50	1.690
CA 203.125	125	1.690
CA 203.250	250	1.690
CA 203.500	500	1.690
CA 203.1000	1000	1.690
CA 203.1500	1500	1.690

CA 203 Series • Adapter Specification

Inch Adapter Type	D [inch]	Metric Adapter Type	D [mm]
CA 203.DI 100	1.00"	CA 203.DM 25	25
CA 203.DI 125	1.25"	CA 203.DM 30	30
CA 203.DI 150	1.50"	-	-

CA 203 Series • Technical Data

Sensitivity	1.8 mV/V ± 2 %
Accuracy class	± 0.5 % (F <sub>nominal</sub> )
Temperature coefficient	± 0.1 % / 10 K
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

Options:

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

Order code (example):

CA203.500.DM30.PH.H14



Scope of delivery:

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

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, Atch 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 39487035  
 fmsit@fms-technology.com