



# DCS™-400/SBV™-202P

## Capacitive Stator Bar Vibration Measuring Chains

The DCS-400 and SBV-202P are non-contact capacitive sensors that are embedded in a stator slot or wedge, facing the stator bars, to measure in-slot stator winding vibration. Apart from having two completely distinct installation procedures, these sensors both transfer their raw signal to a conditioner to be converted into a linearized 4 to 20 mA signal.

### General Specifications

#### Sensors (Complete characteristics on following pages)

##### Operation

- Measurement Type Non-Contact Proximity, Capacitive Technology

##### Connection

- Integral Cable
  - DCS-400 Coaxial
  - SBV-202P Triaxial
- Integral Cable Connector
  - DCS-400 Male, Nickel-Plated SMA
  - SBV-202P Male, Gold-Plated SMA and Ground Terminal

##### Environment

- Temperature Range
  - Operating 0 to 125°C [32 to 257°F]
- Magnetic Field Immunity Up to 2 Tesla (50 or 60 Hz)
- Dust and Oil Contamination Films Have No Effect
- Humidity Up to 95%, Non-Condensing

##### Physical Characteristics

- Sensor Material Non-Conductive and Semi-Conductive Material
- Integral Cable Material FEP Jacket / Teflon® Insulation

### Extension Cable

#### Connection

- Cable Type Triaxial
- Absolute Minimum Length Nominal Minus 0.5 m [19.7 in]
- Connector
  - Sensor Side Female, Gold-Plated SMA and Ground Terminal
  - Conditioner Side Male, Gold-Plated SMA and Ground Terminal
- Minimum Bending Radius 10 cm [4 in]

##### Environment

- Temperature Range 0 to 75°C [32 to 167°F]

##### Physical Characteristics

- Cable Material PVC Jacket / PE Insulation

### LIN™-300 Conditioner

#### Power Requirements

- Voltage 24 Vdc ±15%
- Consumption 100 mA max.
- Protection Auto-Reset Fuse
- Warm-Up Time 30 Minutes

#### Connection

- Power / Output 5-Pin M12 Male
- Sensor Input Female, Gold-Plated SMA and Grounding Terminal

#### Environment

- Temperature Range
  - Operating 0 to 55°C [32 to 131°F]
  - Storage (Measuring Chain) -25 to 70°C [-13 to 158°F]

#### Physical Characteristics

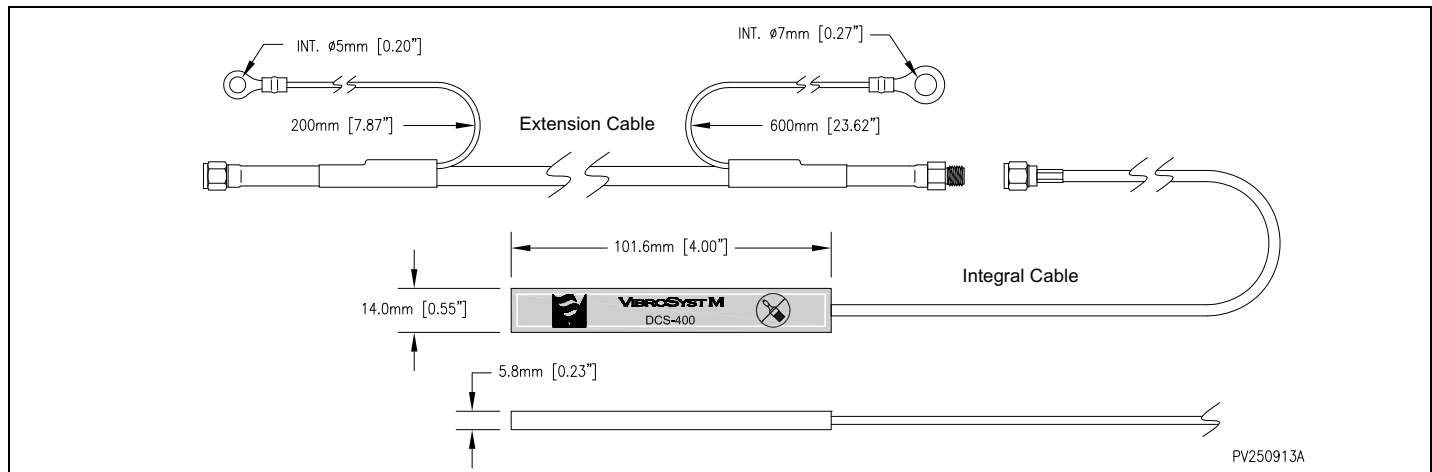
- Body Nickel-Plated Aluminum
- Mounting 4 Slots for #6 (M3.5) Screws
- Max. Torque on SMA 1.1 Nm [10 in-lb]
- Status Indicator Bi-Color LED



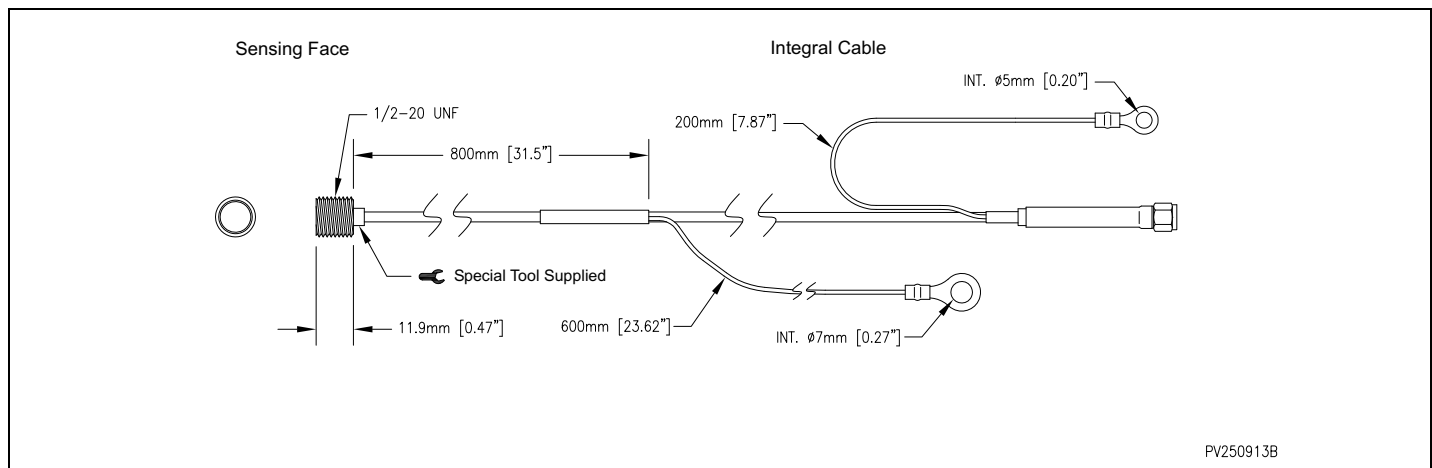
## Specifications for the DCS-400 and SBV-202P Measuring Chains

Sensor	DCS-400	SBV-202P
Nominal Measuring Range	0.5 to 2.5 mm [20 to 99 mils]	0.3 to 2.3 mm [12 to 91 mils]
Sensor Integral Cable Length	40 cm [15.7 in]	6 m [19.7 ft]
Extension Cable Length	10 m [33 ft]	---
Conditioner Model	LIN-340-10S-0.5/2.5	LIN-302VP-6I-0.3/2.3
Output	4 to 20 mA	
Bandwidth	DC to 1.2 kHz (-3 dB)	
Sensitivity	8 mA/mm [203 $\mu$ A/mil]	8 mA/mm [203 $\mu$ A/mil]
Accuracy (full scale)		
0 to 30%	$\pm 1\%$	$\pm 1\%$
0 to 70%	$\pm 3\%$	$\pm 4\%$
0 to 100%	$\pm 6\%$	$\pm 8\%$
Repeatability (% of reading)	$\pm 0.3\%$	$\pm 0.3\%$
Temperature Drift (at mid-range)	< 500 ppm/ $^{\circ}$ C	< 800 ppm/ $^{\circ}$ C
Load at Output	500 $\Omega$ max.	

### DCS-400 - Dimensions



### SBV-202P - Dimensions





## LIN-300 Conditioner Dimensions

