

VS-800 Proximity Transducer System



The VS-800 is eddy current type non-contact displacement/vibration transducer, used for measuring Shaft Vibration, Axial Position, Rotating Speed and Phase Mark (Phase Reference) from small rotating machinery to large critical machinery such as turbines and compressors in plants. The system provides an output voltage directly proportional to the distance between the probe tip and the observed conductive surface. It is capable of both static (position) and dynamic (vibration) measurements. In addition, it is designed to meet the API (American Petroleum Institute) standard 670 requirements, often referred as machinery protection system for petroleum refineries and petrochemical plants around the world.

A VS-800 Proximity Transducer System consists of:

- Probe.
- Extension Cable.
- Driver.

- **Driver**

The VS-800 driver connects to a probe / extension cable pair and provides an appropriate output.



- **Probe**

The VS-800 probe is available in 8mm tip diameter and all standard thread sizes. Probe tip is encapsulated with PEEK/PPS stycast potting.



- **Extension Cable**

The VS-800 extension cable is available in a variety of lengths, with or without protective cable armor.



Specification

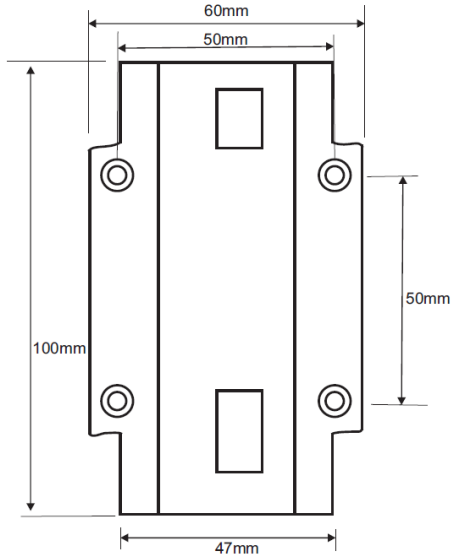
Standard Calibration Target	AISI 4140.
Linear Range	0.25mm to 2.25mm from sensor tip.
Scale Factor	7.87 V/mm.
Scale Factor Tolerance^{*1}	Within 7.87 V/mm $\pm 5\%$ (when system cable length is 5m). Within 7.87 V/mm $\pm 6.5\%$ (when system cable length is 9m).
Linear Characteristic^{*1}	Within $\pm 25\mu\text{m}$ for a straight line of 7.87 V/mm (when system cable length is 5m). Within $\pm 38\mu\text{m}$ for a straight line of 7.87 V/mm (when system cable length is 9m).
Frequency Response^{*1}	Dc to 10 kHz (-3 dB).
Sensor Tip Diameter	Approx. 8mm.
System Cable Length	5 m or 9 m.
Operating Temperature	Probe : $-35\text{ }^{\circ}\text{C}$ to $+120\text{ }^{\circ}\text{C}$ Extension Cable : $-35\text{ }^{\circ}\text{C}$ to $+120\text{ }^{\circ}\text{C}$ Drive : $-35\text{ }^{\circ}\text{C}$ to $+80\text{ }^{\circ}\text{C}$
Power	-24 V $\pm 10\%$

Specifications marked with (*1) apply under the following conditions:

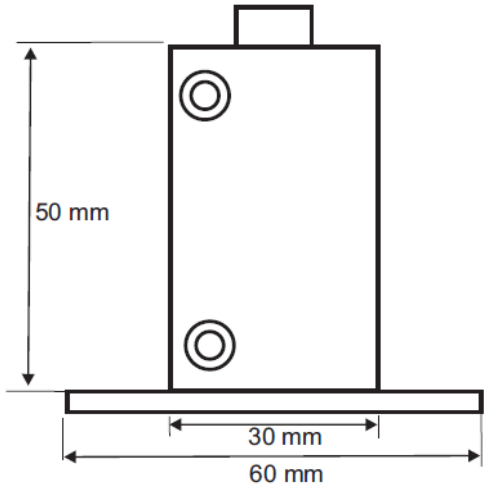
- Standard calibration target AISI4140 flat surface ($\Phi 15\text{ mm}$ or more, $t=5\text{ mm}$ or more).
- -24.0 VDC Power source voltage.
- Load resistance 10 k Ω .
- Ambient temperature 25°C.

Mechanical Details:

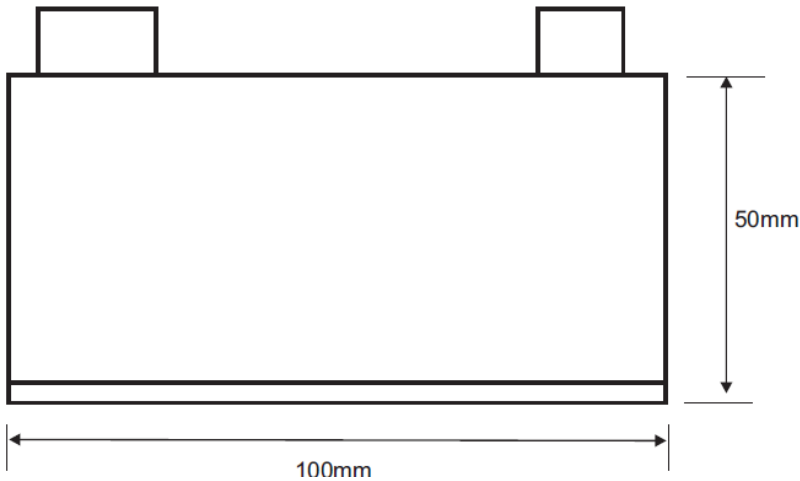
Base Plate:



Side View:



Front View:



ORDERING INFORMATION

Probe:

VS800-100	Ax	Bx	Cx	Dx
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EX: VS800-100-00-12-10-02

Ax. → Threading Option
Bx. → Overall Case Length Option
Cx. → Cable Length Option

Ax. Threading Option.

00 → Standard M10x1mm Pitch

01 → M10x1.5mm Pitch

02 → 3/8-24 UNF threads

Ex: Standard M10x1mm Pitch Ax = 00.

Bx. Overall Case Length Option

Ex: 120mm = 12.

Max: 200mm.

Min: 25mm.

Cx. Cable Length Option

0 5 → 0.5 metre (1.6 feet)

1 0 → 1.0 metre (3.3 feet)

1 5 → 1.5 metre (4.9 feet)

2 0 → 2.0 metres (6.6 feet)

5 0 → 5.0 metres (16.4 feet)

9 0 → 9.0 metres (29.5 feet)

Ex: 05 = 0.5 metre

Dx. Cable Type Option

0 1 → Standard Cable

02 → Armored Cable

Extension Cable Part Number

VS800-200	Axx	Bx
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EX: VS800-200-040-02

Ax. → Cable Length Option

Bx. → Cable Type Option

Ax. Cable Length Option.

030 → 3.0 metre (9.8 feet)

035 → 3.5 metre (11.5 feet)

040 → 4.0 metre (13.1 feet)

045 → 4.5 metres (14.8 feet)

070 → 7.0 metres (22.9 feet)

075 → 7.5 metres (24.6 feet)

080 → 8.0 metres (26.2 feet)

085 → 8.5 metres (27.9 feet)

Ex: 040 = 4.0 metre.

Bx. Cable Type Option

01 → Standard Cable

02 → Armored Cable

Proximitior Part Number

VS800-300	Ax	Bx
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EX: VS800-300-00-12-10-02

Ax. → System Cable Length Option

Bx. → Mounting Option

Ax. System Cable Length Option

1 0 → 1.0 metre (3.3 feet)

5 0 → 5.0 metres (16.4 feet)

9 0 → 9.0 metres (29.5 feet)

Ex: 50 = 5 metre

Dx. Mounting Option

0 1 → Panel Mount

02 → DIN MOUNT