

# Vibration monitoring field equipment

## 12.0 mm range eddy probe system

### Key features

- Multiple probe options available with both metric and imperial dimensions
- Measurement range 12.0 mm
- Nominal sensitivity 1.38 V/mm
- Selectable system lengths (5 m, 7 m, and 9 m)
- DIN rail or plate mounted driver
- Armoured and unarmoured double-screened snap lock cables
- Compliant with API 670 standard
- ATEX and IECEx options available as special order



### Measurement principle

The eddy current measurement system utilizes eddy current principle, being able to measure the distance to the target material as well as dynamic vibration. Measurement is non-contact and reference target material is ANSI 4140.

Eddy probes are widely used with journal bearings machines in shaft vibration, shaft position and casing expansion measurements.

### System description

The eddy probe system consists of calibrated eddy probe, possible extension cable and universal driver.

System total cable length can be 5, 7 or 9 meters. Selected cable length is indicated with a LED on the driver. Gap voltage measurement is possible from a connector on top of the driver for an easy sensor adjustment.

Measurement range is 12.0 mm. Sensitivity is 1.38 V/mm. 12.0 mm range eddy probes are typically used in rotor position and differential expansion measurements.

Cables are available as armoured and unarmoured versions.

## Technical specifications

### System performance

Measurement range	12.0 mm
Linear range	0.63 mm (25 mil) to 12.7 mm (500 mil)
Electrical null position	Approximately 0.50 mm from target (Driver at 0 V)
Linearity	±1%, -1.75 V to -17.5 V ±2%, -1.0 V to -17.5 V ±2%, 0 °C to +150°C @ -10 V
Std sensitivity	1.38 V/mm (35 mV/mil) ±1%
Resolution	< 0.003 mm
Interchangeability	Maximum interchangeability error replacing either probe, extension cable or driver in calibrated system is ± 5 %.
Frequency response	DC to 5 kHz
Reference target material	ANSI 4140

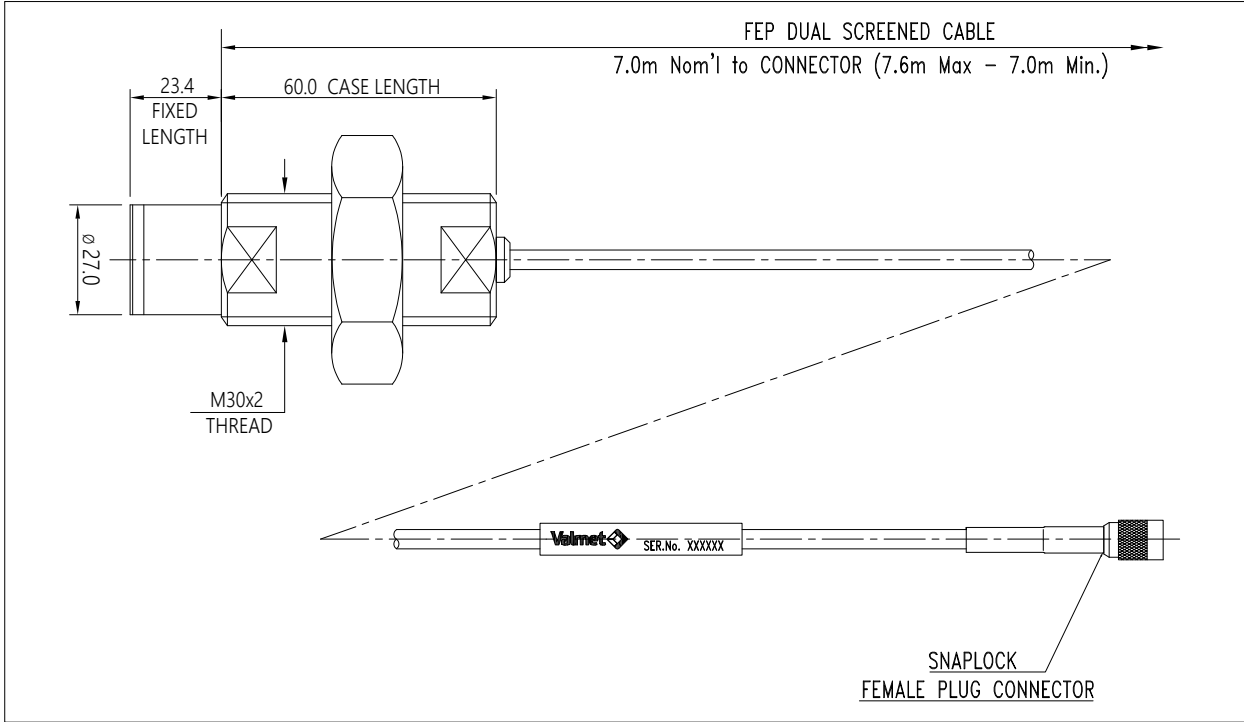
### Probe

Probe diameter	25.0 mm
Probe tip material	PPS 40% glass filled
Probe body material	303 stainless steel
Probe type	Straight type
Cable type	Triaxial 75 Ω coaxial FEP outer jacket 3.2 mm outer diameter
Armoured option	Convuluted stainless steel 6.4 mm outer diameter
Probe resistance	1.1 Ω ±0.2 Ω with 1.0 m cable
Operating temperature	-30 °C – +180 °C
Storage temperature	-40 °C – +180 °C
Minimum target diameter	50 mm
Magnetic field effect	<1 % at 110 mT
Connector	Female miniature coaxial

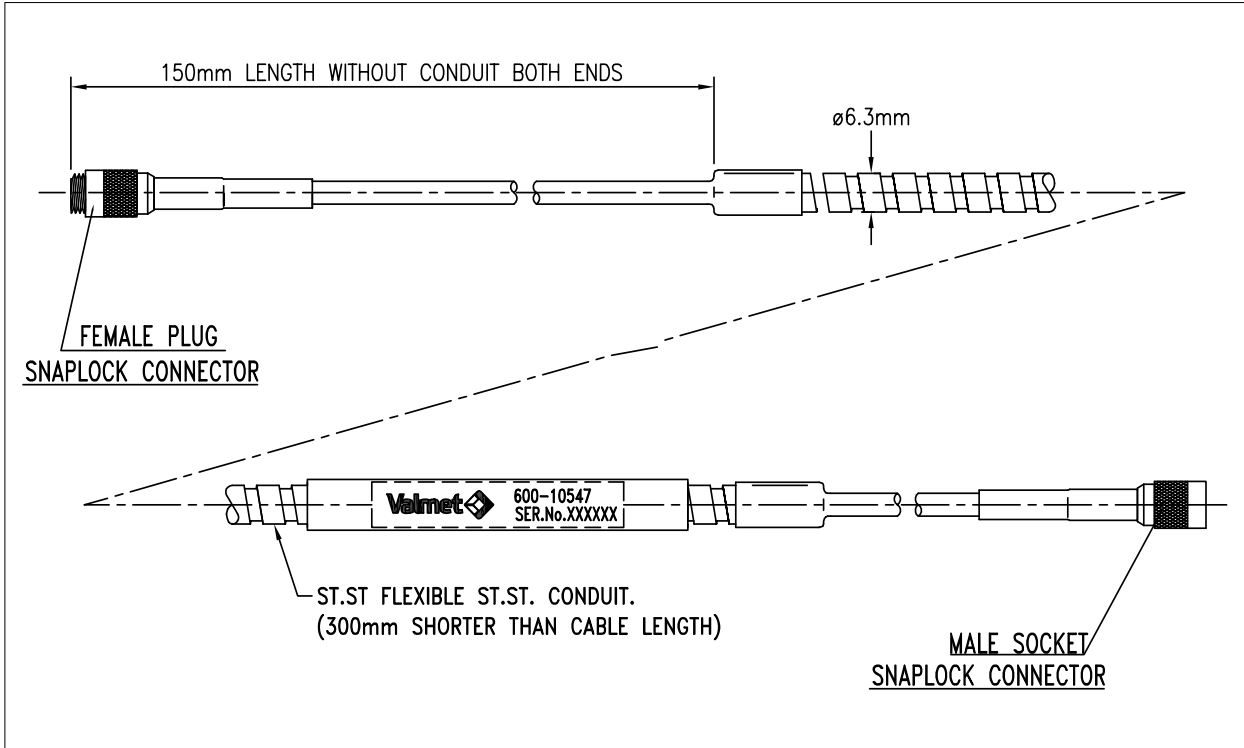
### Driver

Linear voltage range	-1.0 V to -17.5 V for 0.63 mm (25 mil) to 12.7 mm (500 mil)
System length selection	Internal switch 5 m, 7 m or 9 m
System length indication	LED lamp
Power supply	-16.0 VDC to -28.0 VDC Output is limited to 1.2 V below power supply when power supply is < -21.5 V
Power supply sensitivity	< 0.3 mVout / Vsupply
Power consumption	3 mA typical, 7 mA max.
Output impedance	75 Ω
Monitor output impedance	10 kΩ
Sensor Connector type	Self-locking miniature male coaxial
Monitor Connector type	3.5 mm audio jack
Mounting	DIN rail or plate with screw
Mass	250 g
Dimensions (W x H x L)	25.0 mm x 57.54 mm x 110.7 mm
Operating temperature	-30 °C – +90 °C
Storage temperature	-40 °C – +90 °C

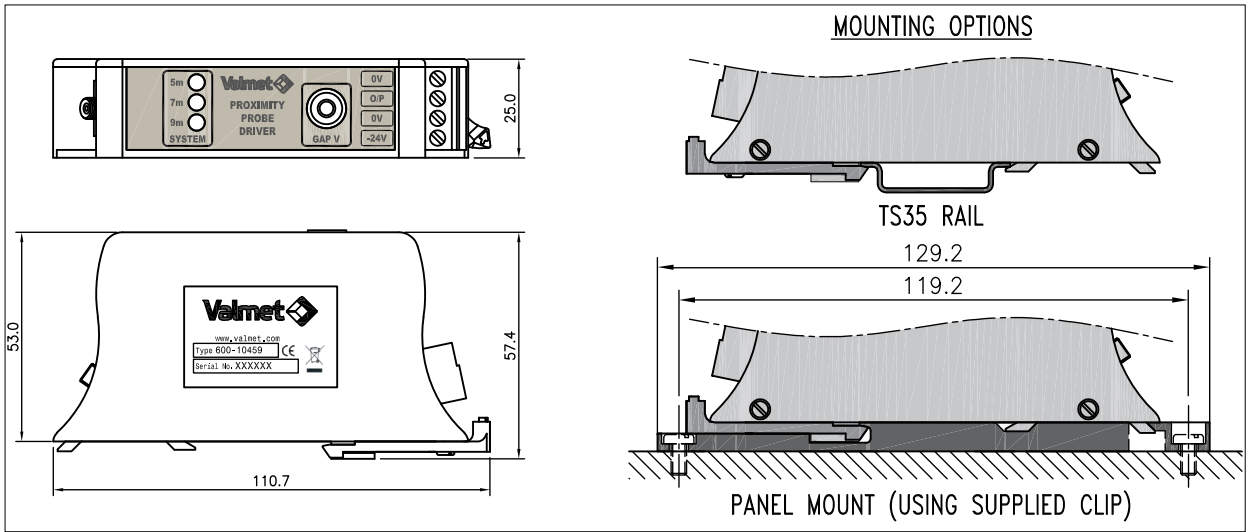
<b>Item code</b>	<b>Product</b>
600-10606	Eddy probe: 1 m cable armoured, straight mount, M30x2 50 mm body, 12 mm range
600-10607	Driver: for 12.0 mm range eddy probes
600-10460	Extension cable: unarmoured, 4 m
600-10524	Extension cable: armoured, 4 m
600-10461	Extension cable: unarmoured, 6 m
600-10462	Extension cable: unarmoured, 8 m
600-10547	Extension cable: armoured, 8 m
600-10829	Extension cable: unarmoured, 8.5 m



Eddy probe straight mount D 27 mm, 60 mm body length, no unthreaded length, unarmoured cable



Extension cable, convoluted SST protection hose option



Driver