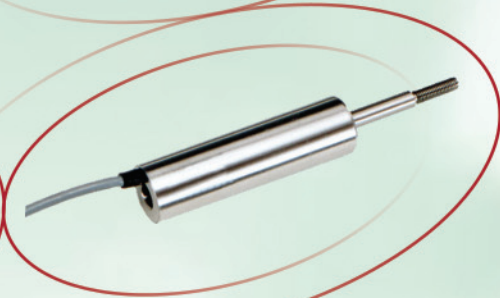
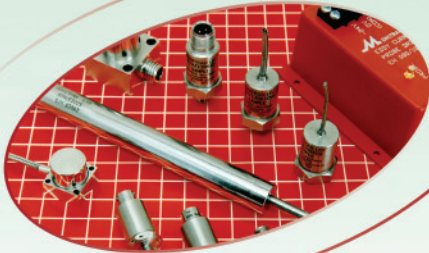
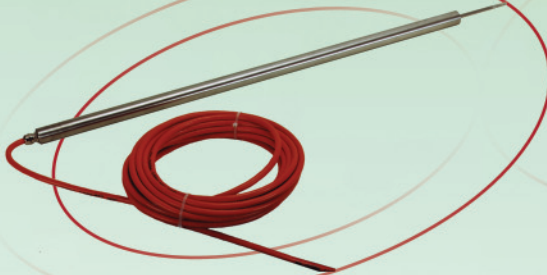
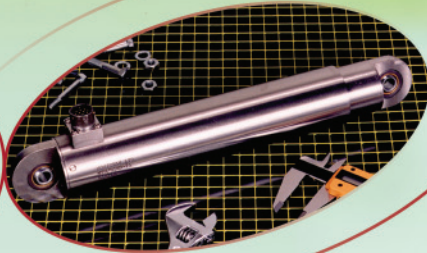
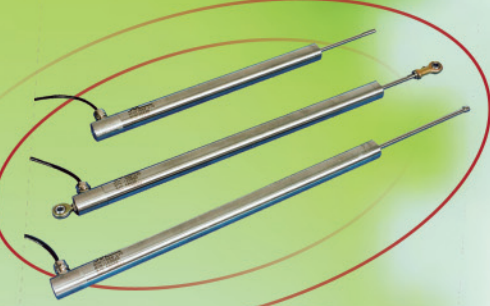
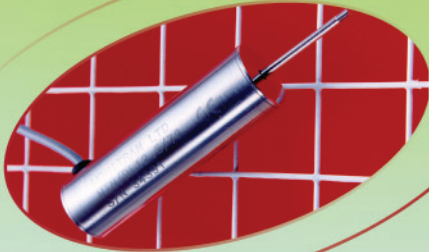




MONITRAN
SENSING THE FUTURE

Linear Variable Differential Transformers



Monitran Linear Variable Differential Transformers

Precision instruments for displacement measurement

Monitran linear variable differential transformers (LVDTs) provide simple, cost-effective solutions whenever you need accurate and precise measurement of linear displacement.

Typical applications

- *Servo-hydraulic systems*
- *Automotive engine management*
- *Marine engine management*
- *Structural movement monitoring*
- *Test rigs*
- *Level monitoring*

As well as a wide range of other engineering and laboratory applications.

Monitran LVDTs at a glance

- *Rugged construction to withstand harsh environments*
- *Measurement ranges from $\pm 0.25\text{mm}$ to $\pm 550\text{mm}$*
- *Efficient and accurate non-contact displacement measurement*
- *Available in a wide variety of configurations*
- *Zero mechanical friction models available*
- *Industrial, low cost and compact versions available*
- *High precision: non-linearity $< 0.5\%$ and repeatability $< 0.1\%$*
- *Four output signal options – unconditioned AC, unconditioned DC (voltage), conditioned DC (voltage) or conditioned DC (current)*
- *Fully customisable design service for non-standard applications*

Selection Tips

Our LVDTs come in a wide range of sizes and combinations. They are ruggedly constructed to withstand the harshest of industrial conditions.

Use this simple checklist to help you choose exactly the right products for your application.

When completed, please detach or photocopy and fax back to our sales team on +44 1494 812256 for an immediate quotation.

Alternatively call us on +44 1494 816569 to go through it on the telephone.

What do you need to cope with your operating environment?

Construction material

- Standard stainless steel construction
- Other material (please specify):

Operating Temperature (-30°C to +85°C standard)

- 30°C to +85°C
- 30°C to +150°C

Sealing (IP65 standard)

- IP65
- IP66
- IP67
- IP68

What sort of cable exit do you need?

- Axial
- Radial

What sort of core assembly is best for you?

- Core only
- Plain core with extension rod
- Guided core with extension rod
- Spring loaded core with extension rod
- Guided core with extension rod and rod end bearings

What measurement range do you need?

The measurement range is quoted as the maximum displacement to be monitored in either direction away from the midpoint. The stroke length may also be quoted and this is equal to the distance between the maximum displacements in either direction (i.e. 2x measurement range).

For example a range of ±5.0mm equates to a stroke length of 10mm.

- Measurement range required (please specify): _____
(Minimum = ±0.25mm, maximum = ± 550mm)

What degree of linearity do you need?

Linearity is the accuracy with which the output signal reflects the measured displacement.

- Standard linearity (±0.5% full stroke length) is sufficient
- Improved linearity required (please specify): _____

What electrical output do you need?

The following standard outputs are available:

- DC bipolar
- 0-5VDC
- 0-10VDC
- 4-20mADC

What type of electrical connection do you need?

- Integral cable
- Detachable cable with:
 - Hirschmann connector
 - Lumberg connector
 - Military Style connector
 - Other connector (please specify): _____
- Free ends with:
 - Standard 2 metres cable
 - Extra length to order (please specify): _____

What type of cable do you need?

Material

- PVC
- PTFE
- ETFE
- Polyurethane

Finish

- Plain
- Overbraided

COMMON TECHNICAL SPECIFICATIONS FOR INDUSTRIAL AND ECONOMY SERIES

Measurement range	±0.25 to ±550mm
Non-linearity	<±0.50% stroke length
Repeatability	<±0.10% stroke length
Operating temperature range	-30°C to +85°C (optional to +150°C) 0°C to 70°C on DC models
Vibration resistance	20g up to 2kHz
Shock resistance	1000g for 10ms
Construction material	Stainless steel core and case
Connections	2-metre screened cable Radial exit (optional axial)

Power requirements and electrical output

Power input

Signal output

5Vrms @ 3kHz	AC
9-24VDC input	0-5VDC
14-24VDC input	0-10VDC
12VDC input	±2.5VDC
24VDC input	±5VDC
14-24VDC input	4-20mA

Industrial, Economy or Miniature Series?

	Industrial	Economy	Miniature
General comments on use	Highest level of protection for severe factory and processing environments	Used in less demanding environments where cost is more important	Used in demanding environments where space is at a premium
Typical applications	<ul style="list-style-type: none"> • Paper mills • Process plant • Industrial test rigs 	<ul style="list-style-type: none"> • Mechanical testing machines • Automotive research • Actuator position monitoring 	<ul style="list-style-type: none"> • Materials testing • Automotive test rigs and actuators • Aerospace test rigs and actuators • Load cells • Pressure transducers • Weighing systems • Closed-loop control applications
Standard build characteristics	<ul style="list-style-type: none"> • Guided core and extension • Sealed at one end • Radial exit • Electronics sealed to IP66 	<ul style="list-style-type: none"> • Free core and extension • Open both ends • Axial exit • Electronics sealed to IP65 	<ul style="list-style-type: none"> • Free core • Body diameter up to 9.5mm • Stroke length $\pm 0.25\text{mm}$ to $\pm 50\text{mm}$
Build options	<ul style="list-style-type: none"> • Axial exit • Connector • Spring loaded • Rod end bearings • Extension rod wiper • Sealed to IP68 	<ul style="list-style-type: none"> • Radial exit • Spring loaded • Guided core • Rod end bearings 	<ul style="list-style-type: none"> • Radial exit • Spring loaded



MONITRAN

*A world leader in vibration,
proximity and displacement
monitoring since 1986*

Established in 1986 and based near High Wycombe in the UK, Monitran is a world leader in the development and manufacture of sensors and systems for vibration, proximity and displacement measurement. The company has the widest range of such products available from any single supplier and has an impressive track record of customising products for bespoke applications.

With full ISO 9001:2000 and, where appropriate, ATEX and IECEx approval for use in hazardous areas, Monitran's products are used for monitoring machinery in a diverse range of industrial applications including automotive, aerospace, building maintenance, industrial processing, paper production, power generation and wind turbines. They are also used extensively in R & D, calibration and structural and equipment qualification testing.

Monitran is a privately-owned independent company. At present all operations are based at a single site a few miles to the west of London. The location is ideally situated for easy access to Heathrow, Gatwick, Stansted and Luton airports, as well as the M40, M4, M25 and M1 motorways and national rail.

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