VRVT 100
IN-CYLINDER TRANSUDER

The VRVT 100 In-Cylinder Transducer combines the best features associated with LVDT's and potentiometers into one rugged, contactless and highly reliable displacement transducer.

With a diameter of only 10mm the VRVT 100 is ideal for installation into hydraulic and pneumatic cylinder applications where space is at a premium. The VRVT 100 is ideal for use on medium stroke actuators and offers a choice of internal or external flange mounting configurations to suit tie-rod, welded and rear clevis-mounted cylinder types. Two core configurations also provide the designer the following options:

SLEEVED CORE - cylinder rods can be simply machined to accommodate the sleeve. This also gives the option of retro-fitting existing servo-cylinders with an upgrade to VRVT technology.

THREADED CORE - provides the designer with the minimum transducer body size and a simplified installation requiring minimal machining.

**PERFORMANCE**

- **Electrical stroke length**: mm
- **Independent linearity**: Better than ±0.2% of stroke
- **Resolution**: Infinite
- **Operational temperature**: °C
  - -40°C to +85°C
  - ≤ ±100ppm of electrical stroke/°C (+20 to +60°C)
  - ≤ ±200ppm of electrical stroke/°C (-40 to +100°C)
- **Temperature performance**: ppm
- **Operating pressure**: 350Bar max.
- **Insulation resistance**: 50MΩ at 100Vdc

**Note**

The above specifications apply only when the VRVT 100 is operated in conjunction with a Penny & Giles EM Series electronic module.

**SIGNAL CONDITIONING**

- **Input voltages**: ±15V (±10%) or +18 to 30Vdc
- **Standard outputs**: 0 to 10Vdc 0 to 5Vdc -5 to +5Vdc 5 to 25mA 0 to 20mA 4 to 20mA

**Notes**

Penny & Giles offer a wide range of electronic modules (EM Series) For specific details please refer to EM Series data sheets.

The modular design of the VRVT 100 enables the rapid delivery of standard ranges.

For custom requirements (such as extended stroke lengths or special mounting flanges) please contact one of our Sales Application Engineers for assistance.
**VRVT 100**

**IN-CYLINDER TRANSDUCER**

**DIMENSIONS**

**Internal Flange**
- Sleeved Core
- VRVT 100//I/S
- Minimum bore dia: 14.5mm
- Stroke length: 50 to 1000mm

**Internal Flange**
- Threaded Core
- VRVT 100//I/TM or TI
- Minimum bore dia: 11mm
- Stroke length: 50 to 1000mm

**External Flange**
- Sleeved Core
- VRVT 100//E/SM or SI
- Minimum bore dia: 14.5mm
- Stroke length: 50 to 1000mm

**Electrical Connections**

**Internal Flange**
- Flying leads: PTFE insulated
  - M8 x 1.25 - 6g or imperial 5/16 24-UNF-2A

**External Flange**
- Cable: 3 core + screen
  - M20 x 1.5 - 6g or imperial 3/4 16-UNF-2A

**Optional connector**
- Connector pin numbers

**Ordering Codes**

- **I** = Internal mounted flange
- **E** = External mounted flange
- **SM** = Sleeved core (metric)
- **SI** = Sleeved core (imperial)
- **TM** = Threaded core (metric)
- **TI** = Threaded core (imperial)

**NOTE**

See EM Series data sheets for full technical specifications and ordering code.

**WEB SITE**

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