



Rotary Variable Differential Transformers RVDT



From Sensors to Systems...

- more feedback, ➤ more precision,
- more control, ➤ more performance

Our acknowledged leadership in variable differential transformer technology provides the rotary equivalents of the robust LVDT linear sensor, the RVDT and the inductive transducer, the RVIT. Aircraft include the AH-64 Apache Longbow Helicopter and the BAE 146. They are employed in numerous applications including flight recorder data acquisition tasks such as aileron, elevator, pitch trim, yaw damper and airbrake control.

Penny+Giles are able to deliver the most cost competitive components, of proven quality and unmatched performance. Components that are, almost certainly, already approved and qualified for *your* application.

- Aerospace Qualification to MIL-STD-810 & MIL-STD-461
- High reliability from Non-contacting Technology
- 360° Continuous rotation
- Can be sealed for pressurised systems

The inherent design of the Rotary Variable Differential Transformer is rugged. Penny+Giles have continuously developed this technology by selecting advanced materials, employing non-contact designs and skilled manufacturing methods to improve the envelope of **Performance to Size to Cost**

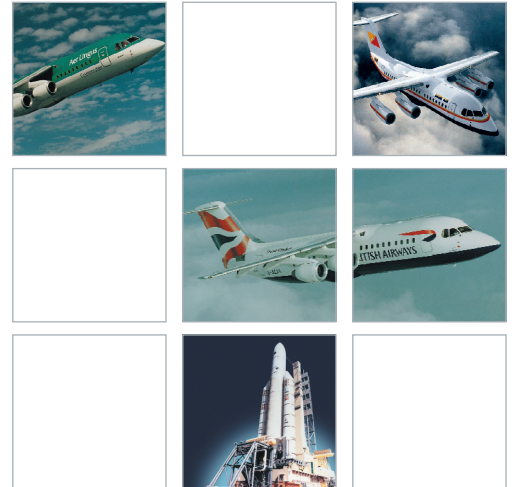
...with uncompromised **Reliability**.

This data sheet provides typical technical details for specifiers and designers.

Talk to your local Penny+Giles engineering office about *your* application and critical parameters. We are always pleased to discuss alternatives and provide a full specification for your system.

Penny+Giles leaders in Aerospace Control
...Push **your flight envelope for positive advantage**.

www.pennyandgiles.com



Quality Approvals

Penny and Giles are committed to complete customer satisfaction in all products and services. International quality approvals include BS EN ISO9001:1994 and Civil Aviation Authority



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Typical outline specification

For further information please contact the sales department as listed below.

Penny & Giles aerospace RVDTs have been developed for use in the most demanding aerospace applications where they withstand extremes of temperature, pressure and vibration. Applications include AH-64 Apache Longbow Attack Helicopter.

Key Features

- High reliability from non-contacting technology
- High integrity devices for low cost of ownership
- Can be sealed for use in pressurised systems
- Aerospace qualification to MIL-STD-810 and MIL-STD-461

To provide high overall system accuracy most RVDTs have been designed primarily for use in the "difference over sum" (or ratiometric) configuration, where the output is unaffected by temperature and supply current changes. However, they can also be used in the differential output configuration more commonly used by other manufacturers.

Mechanical

Dimensions: see download details
Mass: 250g
Angular Displacement: 360deg continuous rotation

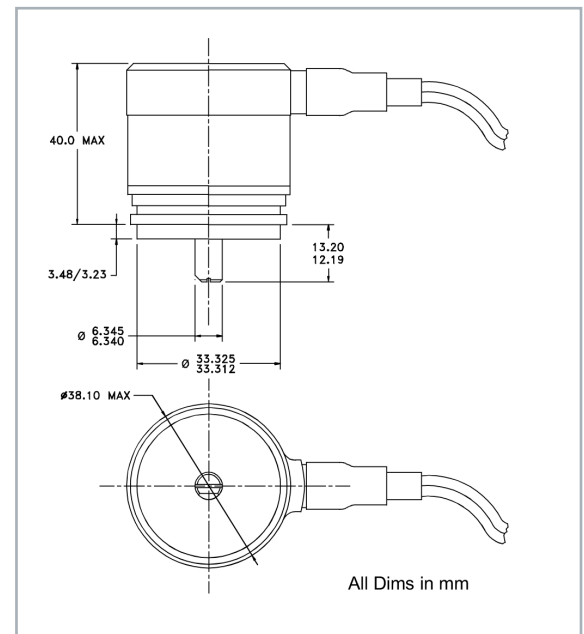
Electrical

For the temperature range -55°C to +85°C

Supply Voltage: 3Vac to 30Vac
Supply Frequency: 400Hz to 3kHz
Angular Displacement: +- 20° max
Operating Mode: Ratiometric
Linearity: +-5%to +-1.0% fsd, dependant on angular displacement
Resolution: Virtually infinite

Environmental

Operating Temperature: MIL-STD-810, -55°C to 85°C
Altitude: MIL-STD-810, -2,300ft to 20,000ft
Humidity: MIL-STD-810, <=95%RH
Vibration: MIL-STD-810, 20g(sine), 4.4g/1.9g/HZ(sine on random)
Sand & Dust: MIL-STD-810
Fungus Resistance: MIL-STD-810
EM Compatibility: MIL-STD-810, 200V/m



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