

R28-017 series

High reliable RVDT rotary variable differential transformer

ABEK SENSORS R28-017 series RVDT rotary variable differential transformer is an angular displacement transducer/sensor that can provide a linearly proportional voltage output for angular displacement in harsh environments such as low temperature/high temperature, strong shock and vibration.

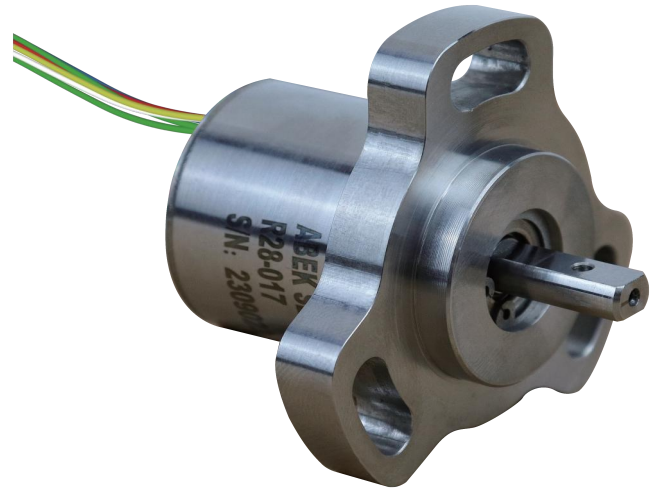
This series of RVDTs adopts a non-contact, integral coil and rotor design, which has high reliability and long service life.

The R28-017 series RVDT is a ratio-metric (differential ratio sum) design, and the output is almost unaffected by temperature and power supply changes, which can effectively improve the system accuracy.

The RVDTs operate under AC mode and have no built-in signal conditioning electronics, making them suitable for a very wide operating temperature range (-55°C to 155°C).

The R28-017 series has a measuring range of $\pm 65^\circ$ and is suitable for applications such as aerospace, aircraft, engine, valve position feedback and rotary brake feedback.

Our company can be customized in many aspects according to customer requirements, including dual-channel redundancy design, installation interface, outlet mode, connector type, etc.



● Applications

- Gas pedal position feedback
- Aircraft wheels
- Flight control system
- Servos
- Valve position feedback for aviation fuel conditioning systems
- Machinery and equipment

● Advantages

- Virtually unlimited lifespan
- Quick dynamic response
- Resistant to strong shock vibrations
- No contact friction between the sensing elements
- Wide working temperature range

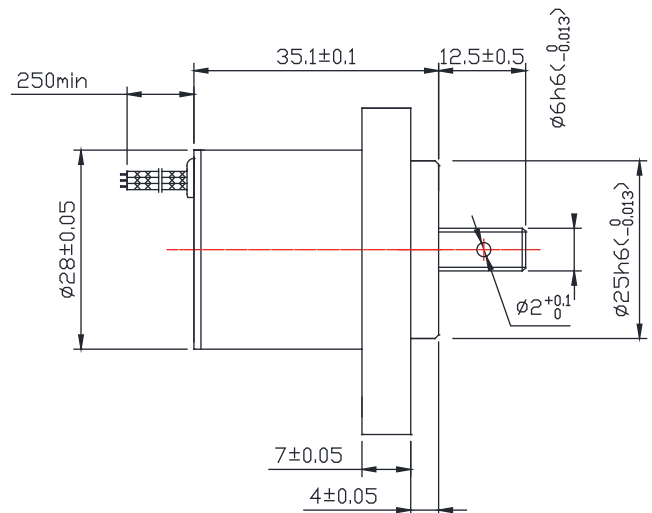
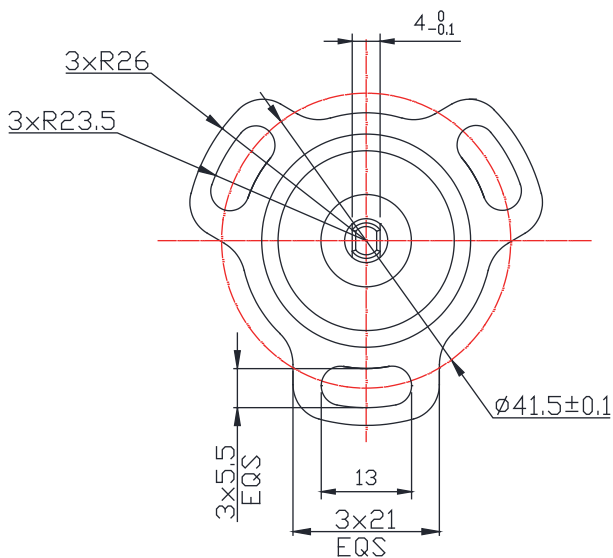
Standards and Documentation

| | |
|---------------|---|
| JJF1352-2012 | Calibration specification for angular-position sensors |
| GJB 361A-1997 | General specification for control motors and feedback components |
| GJB 1456-1994 | General specification for single-winding linear rotary transformers |

General Specifications

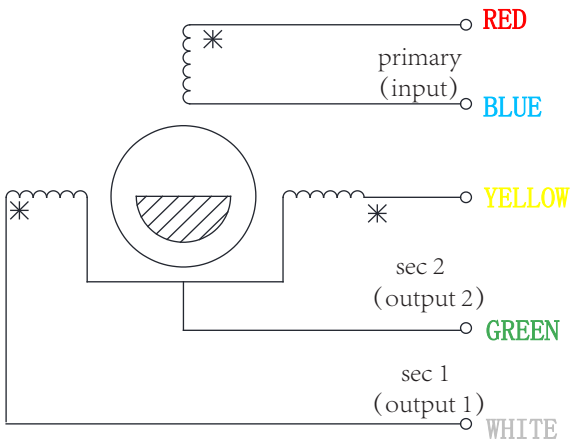
| Parameters | Specifications | | |
|--|---|----------------|----------------|
| Range | $\pm 65^\circ$ (Full-range 130°) | | |
| Mechanical angle | 360° | | |
| Excitation voltage | 3V | | |
| Excitation frequency | 3000Hz | | |
| Output mode | $(V_a - V_b)/(V_a + V_b)$ | | |
| Sensitivity | $(7.4 \text{ to } 8.0) \text{ mV/V}^\circ$ (ratio-metric) | | |
| Full-range output ratio ($\pm 65^\circ$) : | $\pm 0.53V$ | | |
| Linearity | $\pm 40^\circ$ | $\pm 50^\circ$ | $\pm 65^\circ$ |
| | $< \pm 0.5\%$ | $< \pm 1\%$ | $< \pm 2\%$ |
| Summed voltage | $3V \pm 6\%$ | | |
| Zero voltage | $\leq 25\text{mV}$ | | |
| Phase | $\leq 12^\circ$ | | |
| Insulation resistance | 500V DC, $> 100M\Omega$ | | |
| Dielectric strength | AC 500Vrms, 60s | | |
| Operating temperature | -55°C to $+155^\circ\text{C}$ | | |

Dimensions

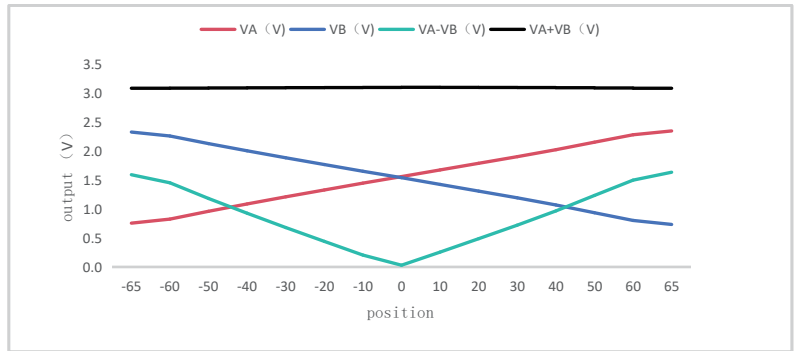


All dimensions are in millimeters
unless otherwise specified.

● Wiring Information



● Output Characteristics



● Contact us

Contact us for technical consultation or customization requests.

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