

# Environmentally Resistant RVDT

Rotary Variable Differential Transformer  
TS7021N8000E30 | Size 08

## Description

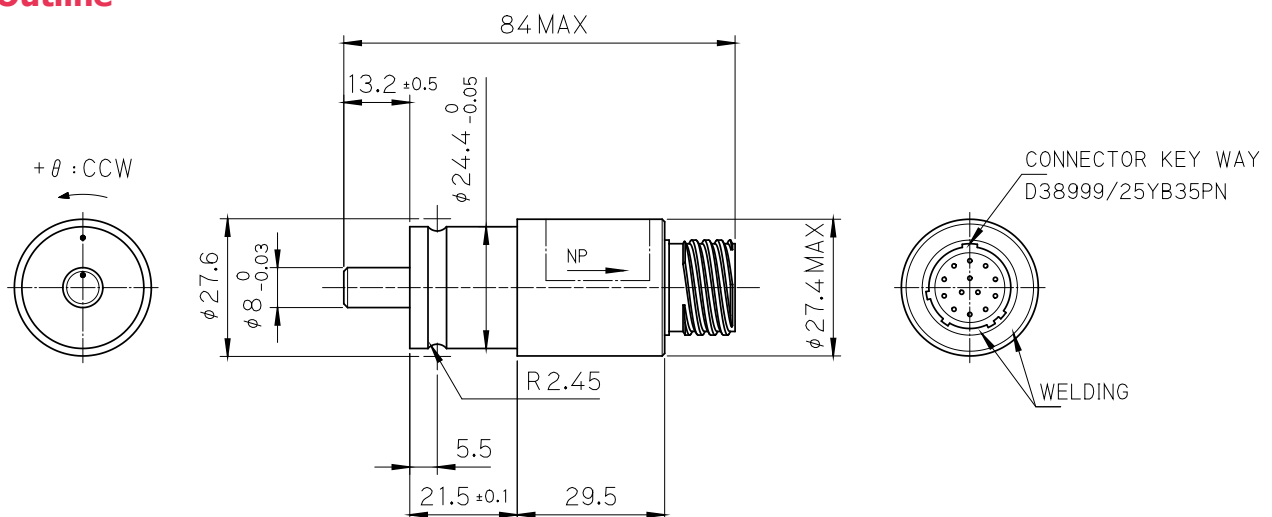
TAMAGAWA Environmentally Resistant RVDT provides linearly proportional voltages to the angular displacement with high reliability for vibration under extreme low/high temperature. Major features of this sensor are high reliability in harsh environment and long lifetime because of its simple non-contacting structure. Compare to other type of angular position sensor, this sensor is smaller and lighter. This RVDT is used for angular position sensor of Flight control system and placed in fixed wings that is severe environment. This RVDT has hermetically seal function, corrosion resistance and robustness, and is able to keep its function in condition specified in RTCA DO-160G.



## Features

- Designed for commercial aircraft use
- Hermetic connector & shaft sealing enables high airtightness
- Hole in straight shaft enables easy gear fixation
- High Reliability - No coil inside the RVDT rotor

## Outline



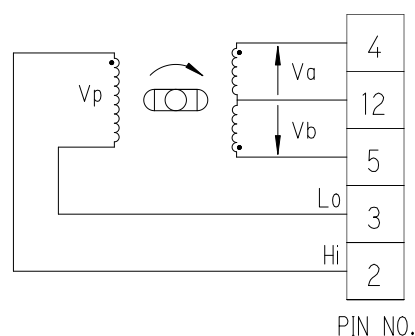
\*Dimensions are in mm

## Specifications

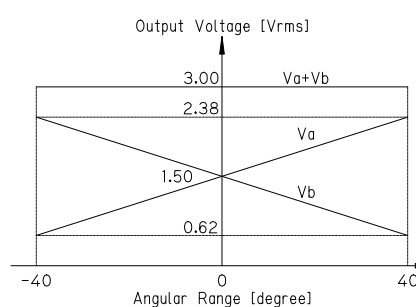
Electrical Stroke	±40 deg.
Input Voltage	5.0 Vrms, 3000 Hz
Gain	0.0147 V/V/deg. (Ratiometric)
Secondary SUM Voltage	3.00 Vrms ±10 %
Accuracy	±0.50 deg. MAX ±0.35 deg. MAX (0 ±0.35 deg.)
Input Current	17 mA MAX
Dielectric Strength	AC 500 Vrms, 60 s
Insulation Resistance	100 MΩ MIN, DC 500 V
Mass	180 g MAX
Temperature Range	-55 °C to +85 °C

## Schematic

Connector Pin Assign



Nominal Output Voltage



## Quality Verification

- RTCA/DO-160G

Test Item	Specification	Category
Temperature and Altitude	DO-160G, Section 4	D2
Temperature Variation	DO-160G, Section 5	A
Humidity	DO-160G, Section 6	B
Operational Shocks & Crash Safety	DO-160G, Section 7	B
Vibration	DO-160G, Section 8	R & H
Water Proofness	DO-160G, Section 10	R
Salt Fog	DO-160G, Section 14	S
Magnetic Effect	DO-160G, Section 15	B
Induced Signal Susceptibility	DO-160G, Section 19	ZC
Ratio Frequency Susceptibility	DO-160G, Section 20	YG
Lightning Induced Transient Susceptibility	DO-160G, Section 22	A3J5M5
Icing	DO-160G, Section 24	B
Electro Static Discharge	DO-160G, Section 25	A
Endurance	1,000,000 cycles	N/A