



Navigational Sensors

SANS 1-Axis

DANS 2-Axis

TANS 3-Axis

for

Dynamic Yaw Rate Measurement

CORRSYS-DATRON Navigation Sensor Modules combine a solid-state, tri-axial rate gyro with a single-, dual- or tri-axial accelerometer in a single, ultra-compact housing.

Features

- Simultaneous measurement in up to 6 axes
(3-axis rate gyro & 1-, 2- or 3-axis accelerometer)
- $\pm 3g$, accelerometer
- ± 150 degrees/sec., rate gyro
- Temperature range: -40°C to $+85^{\circ}\text{C}$
- max. 2,000g unpowered shock survival
- ultra-compact, approx. 100 x 60 x 35 mm (4 x 2,25 x 1,375")
- lightweight, 230 g (8,2 oz)



Art. No.:

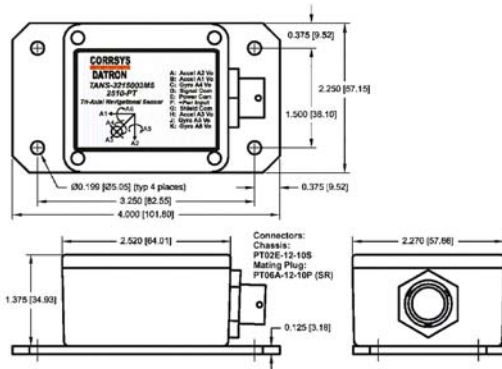
SANS - 13484

DANS - 13485

TANS - 14645

Typical Technical Data

Parameter	Value (nominal)	Tolerance
Gyro:		
Full scale sensitivity	±150 degree per sec; 12.5 mV/deg/sec	±10% FS
Zero rate bias output	+2.5 V DC, nominal; Ta = +25° C	±100 mV
Full scale span	±2.0 V DC	±10% FS
Frequency response	DC to 25 Hz, -3dB; -6dB/octave roll-off	±20%
RMS equivalent noise	1 deg/sec RMS Gaussian; BW = 25 Hz	±25%
Nonlinearity	±0.1% FS	
Alignment	±0.1" (2.5 mm) from module axis center lines	±0.05"
Transverse sensitivity	0.2 deg/sec/g, typical	±25%
Zero rate bias drift	200 mV max; -40° C to +85° C temp span	
Accelerometer:		
Full scale sensitivity	±3g; 666 mV/g;	±1% FS
Zero g bias output	+2.5 V DC, nominal;	±100 mV
Full scale span	±2.0 V DC at ±3 g	±1% FS
Frequency response	DC to 10 Hz, -3dB; -6dB/octave roll-off	±10%
RMS equivalent noise	800 µg RMS gaussian; DC to 10 Hz. BW	±15%
Nonlinearity	±0.2% FS; ±2 milli-g equivalent	±25%
Alignment	±2 degrees	±15%
Transverse sensitivity	±2% FS span (max); 20 milli-g equivalent	±10%
Zero g bias drift	0.2g max at -40° C to +85° C	
Temperature range	-40° C to +85° C (operating) -65° C to +105° C (storage)	
Supply Voltage	+8 to +42 V DC +12.0 V DC, ±5 V DC, test conditions	+56 V DC max.
Supply Current (no load)	60 mA (tri-axial)	±10 mA
Shock	1000 g max (powered) 2000 g max (unpowered)	
Output Series Impedance	100 Ω 56 pF	±50 Ω
Output Loading	5,000 Ω or greater 10 nF or less referenced to zero bias value (+2.5 V DC)	
Mass	230 grams (8.2 oz)	±25 grams
Packaging	die-cast anodized aluminum body	



Wiring Connections

Connector	Color	Function
A	yellow	accel axis A2 Vo
B	white	accel axis A1 Vo
C	brown	gyro axis A4 Vo
D	blue	signal common
E	black	power common
F	red	Vps power in
G	shield	shield common
H	green	accel axis A3 Vo
J	orange	gyro axis A5 Vo
K	violet	gyro axis A6 Vo

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