IEEE STANDARDS ASSOCIATION

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Errata to IEEE Specification Format for Single-Degree-of-Freedom Spring-Restrained Rate Gyros

Sponsor

Gyro and Accelerometer Panel
of the

IEEE Aerospace and Electronic Systems Society

Correction Sheet

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Page 11, 3.3.14 Zero Offset should be corrected to read as follows:

_______ °/s max.

Page 11, 3.3.15 Zero Acceleration-Sensitive Drift Rate should be corrected to read as follows:

_______ (°/s)/g max.
_______ (°/s)/g^2 max.

Page 12, 3.3.19 Angular Acceleration Sensitivity About the Output Axis should be corrected to read as follows:

_______ (°/s)/(rad/s^2) max.

Page 17, 3.6.4.2 Vibration should be corrected to read as follows:

Sinusoidal: ______ in double amplitude (DA) ______ to ______ hertz; ______ *g* peak, ______ to ______ hertz. Sweep rate shall be ______ minutes per octave (continuous). Exposure shall be ______ minutes per axis.

> Axes shall be defined.
>
> When available, supply the specific vibration versus frequency for the application.
>
> If exposure to random vibration is required, power spectral density, bandwidth, peak acceleration level, and duration shall be specified.

In subclause 6.3, the term K_t should be listed as shown below:

K_r

Page 26, 6.3 Model Equation, the first Equation should be corrected to read as follows:

$$\frac{J}{H}\ddot{\theta}_0 + \frac{C}{H}\dot{\theta}_0 + \frac{K_r}{H}\theta_0$$

$= \dot{\varphi}_i$ (effect of case rotation about the IRA)

$- \dot{\varphi}_s(\theta_0 + \epsilon_0)$ (effect of case rotation about the SRA)

$+ \dot{\varphi}_0 \epsilon_s - (J/H)\ddot{\varphi}_0$ (effect of case rotation about the axis perpendicular to the IRA and SRA)

$+ D_0$ (acceleration-insensitive drift rate)

$+ D_{1i}a_i + D_{1s}a_s$ (acceleration-sensitive drift rate)

$+ D_2 a_i a_s$ (acceleration-squared-sensitive drift rate)

$+ K_r i$ (command rate)

Page 26, 6.3 Model Equation, in the where list, the $\in_0$ and $\in_s$ description should be corrected to read as follows:

$\in_0$ = Misalignment angle between the plane containing SRA and the axis perpendicular to IRA and SRA, and the plane containing SA and the axis perpendicular to IRA and SRA, when $\dot{\Phi}_i = \dot{\Phi}_0 = \dot{\Phi}_s = 0$. It is approximately equal to $[D_0 - (K_r/H + \dot{\Phi}_s)\ \theta_0]1/\dot{\Phi}_s$.

$\in_s$ = Misalignment angle between the plane containing SA and the axis perpendicular to IRA and SRA, and the plane containing SA and OA. It is approximately equal to $[(K_r/H)\ \theta_0 - D_0]\ 1/\dot{\Phi}_0$.