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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)

$+ K_{\mathrm{r}} i$ (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 $[(K_r/H)\ \theta_0 - D_0]\ 1/\dot{\Phi}_0$.