Alternatively, seismic data may be digitised with Trillium in UVW mode and the transformation to horizontal and vertical signals implemented optionally when the data is processed. This allows for studies and calibrations where both UVW and XYZ data are required.

4.4 Frequency Response

The nominal poles (p_n), zeroes (z_n), normalization factor (k), and normalization frequency of the Trillium are shown in Table 4-2. These parameters define the transfer function according to this equation:

$$F(s) = S_{sensor} \cdot k \cdot \frac{\prod_{n}(s + z_n)}{\prod_{n}(s + p_n)} \left[\frac{V \cdot s}{m}\right] \qquad \text{(EQ 3)}$$

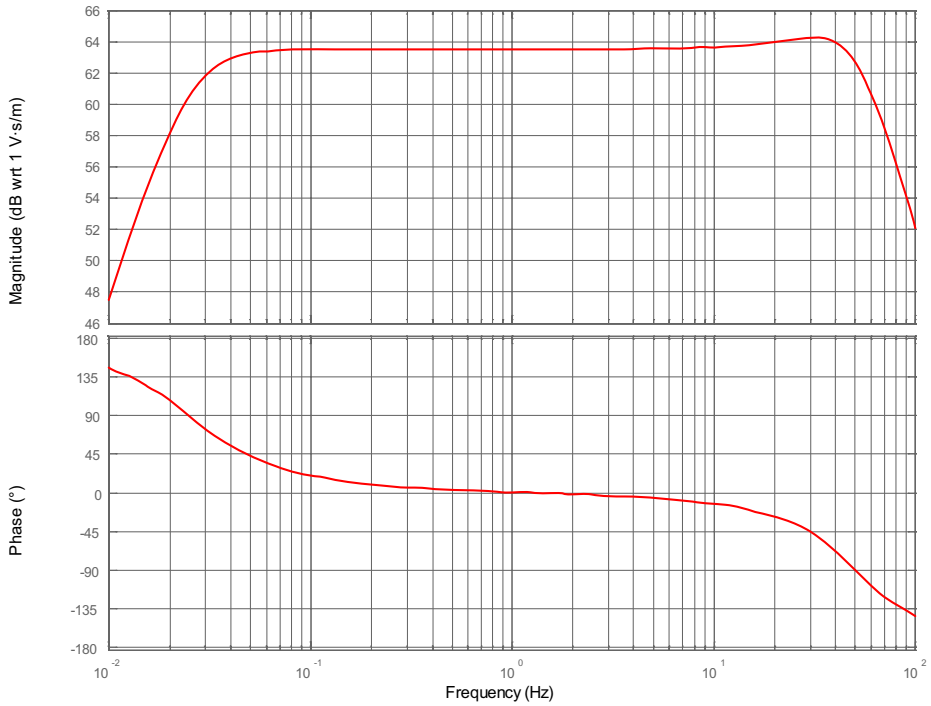
Table 4-2 Poles and zeroes

	Nominal values	Units
Zeroes	0 0 51.5	rad/s
Poles	–272 ±218i 56.5 –0.1111 ±0.1111i	rad/s
Normalization Factor	133310	
Normalization Frequency	1	Hz

The passband sensitivity is 1500 V·s/m.

The transfer function is approximately flat from 40 s to 50 Hz and rolls off at 40 dB/decade below the lower corner frequency, as shown in Figure 4-2.

Figure 4-2 Nominal frequency response



4.5 Self-Noise

Typical Trillium self-noise is plotted in Figure 4-3. Curves indicating Peterson's new high- and low-noise models are included for reference.