

3 Calibration and test results

3.1 Calibration Sheets

3.1.1 CMG-1T sensors

3.1.1.1 T1063

CMG-1T CALIBRATION SHEET

WORKS ORDER:	4146	DATE:	07-Aug-2009
SERIAL NUMBER:	T1063	TESTED BY:	S. Goddard

	Velocity Output V/m/s (Differential)	Mass Position Output (Acceleration output) V/m/s ²	Feedback Coil Constant Amp/m/s ²
VERTICAL	2 x 749	2114	0.01409
NORTH/SOUTH	2 x 747	1432	0.01432
EAST/WEST	2 x 717	1430	0.0143

Power Consumption: 60mA @ +12V input
 Calibration Resistor: 51000

NOTE: A factor of 2 x must be used when the sensor outputs are used differentially (also known as push-pull or balanced output). Under no conditions should the negative outputs be connected to the signal ground. A separate signal ground pin is provided.

POLES AND ZEROS TABLE**WORKS ORDER NUMBER: 4146****SENSOR SERIAL NO: T1063**

Velocity response output, Vertical Sensor:

<u>POLES (HZ)</u>	<u>ZEROS (HZ)</u>
$-1.964 \times 10^{-3} \pm j1.964 \times 10^{-3}$	0
-30.0529±j31.1211	0
-41.2564±j114.535	

Normalizing factor at 1 Hz: A = 27.7×10^6

Sensor Sensitivity: See Calibration Sheet.

Velocity response output, Horizontal Sensors:

<u>POLES (HZ)</u>	<u>ZEROS (HZ)</u>
$-1.964 \times 10^{-3} \pm j1.964 \times 10^{-3}$	0
-30.0529±j31.1211	0
-41.2564±j114.535	

Normalizing factor at 1 Hz: A = 27.7×10^6

Sensor Sensitivity: See Calibration Sheet.

NOTE: The above poles and zeros apply to the vertical and the horizontal sensors and are given in units of Hz. To convert to Radian/sec multiply each pole or zero with 2π . The normalizing factor A should also be recalculated.