

DM24 CALIBRATION

WORKS ORDER: 1321

SERIAL NUMBER: D0428

SYSTEM ID: WO1321
UNIT ID: 3113
OUTPUT DATA FORMAT: GCF
BAUD RATE: 9600

DSP SOFTWARE: DSP?SYN.001
H8 SOFTWARE: DM24-3M.078

VELOCITY CHANNELS

Sample Rate: 100 samples/sec

Channel:	3113Z2	Vertical	1.284 $\mu\text{V}/\text{Bit}$	430.008E-12 M/S/Bit
	3113N2	North/South	1.279 $\mu\text{V}/\text{Bit}$	418.152E-12 M/S/Bit
	3113E2	East/West	1.288 $\mu\text{V}/\text{Bit}$	421.903E-12 M/S/Bit

MASS POSITION CHANNELS

Sample Rate: 4 samples/sec

Channel:	3113M8	Vertical	282.40 $\mu\text{V}/\text{Bit}$	275.508E-9 M/S ² /Bit
	3113M9	North/South	283.79 $\mu\text{V}/\text{Bit}$	274.198E-9 M/S ² /Bit
	3113MA	East/West	282.74 $\mu\text{V}/\text{Bit}$	276.658E-9 M/S ² /Bit

TEMPERATURE

Sample Rate: 4 samples/sec
Temperature Range: 233 - 373 Kelvin
Accuracy: $\pm 5\%$
Channel: 3113ME 12.87 mK/Bit

CAL SIGNAL MONITOR

Sample Rate: 4 samples/sec
Channel: 3113MB 257.21 $\mu\text{V}/\text{Bit}$

GPS RECEIVER

PWM: 9600 Counts
At Temperature Reading: 23°C

POWER CONSUMPTION

Digitiser Power Consumption
GPS Power Consumption

134mA @ 12v
90mA @ 12v

**DM24 CALIBRATION
AUXILLRAY CHANNELS**

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CHANNEL	μV/Bit
3113M0	210.24 μV/Bit
3113M1	209.93 μV/Bit
3113M2	210.81 μV/Bit
3113M3	210.66 μV/Bit
3113M4	210.72 μV/Bit
3113M5	210.82 μV/Bit
3113M6	210.05 μV/Bit
3113M7	210.99 μV/Bit

N.B Range +/- 6.75 Volts (maximum input)

CMG-3ESP CALIBRATION SHEET

WORKS ORDER: 1327 DATE: 24/02/12
SERIAL NUMBER: T3113 TESTED BY: SDG

	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 2985	1025	0.0218
NORTH/SOUTH	2 x 3058	1035	0.02203
EAST/WEST	2 x 3053	1022	0.02175

Power Consumption: 118mA @ +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: 1327

SENSOR SERIAL NO: T3113

Velocity response output, Vertical Sensor:

<u>POLES (HZ)</u>	<u>ZEROS HZ</u>
$-23.56 \times 10^{-3} \pm j 23.56 \times 10^{-3}$	0
$-50 \pm j 32.2$	0
	$138 \pm j 144$

Normalizing factor at 1 Hz: A = -0.0903

Sensor Sensitivity: See Calibration Sheet.

Velocity response output, Horizontal Sensors:

<u>POLES (HZ)</u>	<u>ZEROS (HZ)</u>
$-23.56 \times 10^{-3} \pm j 23.56 \times 10^{-3}$	0
$-50 \pm j 32.2$	0
	$138 \pm j 144$

Normalizing factor at 1 Hz: A = -0.0903

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.