

DM24 CALIBRATION

WORKS ORDER: 2078

SERIAL NUMBER: D0069

SYSTEM ID: WO2078
UNIT ID: 3234
OUTPUT DATA FORMAT: GCF
BAUD RATE: 9600

DSP SOFTWARE: DSP?ROM.001
H8 SOFTWARE: DM24-3M.084

VELOCITY CHANNELS

Default Sample Rate: 100 samples/sec

Channel:	3234Z2	Vertical	1.275 $\mu\text{V}/\text{Bit}$	1.341E-9 M/S/Bit
	3234N2	North/South	1.289 $\mu\text{V}/\text{Bit}$	1.335E-9 M/S/Bit
	3234E2	East/West	1.282 $\mu\text{V}/\text{Bit}$	1.339E-9 M/S/Bit

MASS POSITION CHANNELS

Default Sample Rate: 4 samples/sec

Channel:	3234M8	Vertical	282.88 $\mu\text{V}/\text{Bit}$	305.483E-9 M/S ² /Bit
	3234M9	North/South	281.52 $\mu\text{V}/\text{Bit}$	284.653E-9 M/S ² /Bit
	3234MA	East/West	282.75 $\mu\text{V}/\text{Bit}$	298.261E-9 M/S ² /Bit

TEMPERATURE

Sample Rate: 4 samples/sec
Temperature Range: 233 - 373 Kelvin
Accuracy: $\pm 5\%$
Channel: 3234ME 1.25E-02 K/Bit

CAL SIGNAL MONITOR

3234MB 258.20 $\mu\text{V}/\text{Bit}$ @ 4 samples/sec

GPS RECEIVER

PWM: 9300 Counts
At Temperature Reading: 23°C

POWER CONSUMPTION

Digitiser Power Consumption
GPS Power Consumption

118mA @ 12v
41mA @ 12v

**DM24 CALIBRATION
AUXILLRAY CHANNELS**

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CHANNEL	μV/Bit
3234M0	211.74 μV/Bit
3234M1	211.60 μV/Bit
3234M2	211.69 μV/Bit
3234M3	211.98 μV/Bit
3234M4	210.26 μV/Bit
3234M5	211.12 μV/Bit
3234M6	210.91 μV/Bit
3234M7	212.05 μV/Bit

N.B Range +/- 10 Volts (maximum input)

CMG-3ESP CALIBRATION SHEET

WORKS ORDER: 2078 DATE: 24/02/12
SERIAL NUMBER: T3234 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 951	926	0.0197
NORTH/SOUTH	2 x 966	989	0.02104
EAST/WEST	2 x 957	948	0.02018

Power Consumption: 68mA @ +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

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SENSOR SERIAL NO: T3234

Velocity response output, Vertical Sensor:

<u>POLES (HZ)</u>	<u>ZEROS HZ</u>
$-7.07 \times 10^{-3} \pm j 7.07 \times 10^{-3}$	0
$-80.5 \pm j 30.8$	0
	150.5

Normalizing factor at 1 Hz: A = -49.5

Sensor Sensitivity: See Calibration Sheet.

Velocity response output, Horizontal Sensors:

<u>POLES (HZ)</u>	<u>ZEROS (HZ)</u>
$-7.07 \times 10^{-3} \pm j 7.07 \times 10^{-3}$	0
$-80.5 \pm j 30.8$	0
	150.5

Normalizing factor at 1 Hz: A = -49.5

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.