G7
Data Storage Tag

Overview

The G7 builds on the success of the G5 product line, by adding accelerometer functionality to the pressure, temperature and (optional) wet/dry sensors which come as standard. The G7 balances small size with functionality to enable users to tag fish, birds or animals whilst allowing them to behave as naturally as possible. This means that tagging studies can be carried out on a wide range of species, opening new fields of research.

These tags allow users to log data at resolutions of up to 12-bit; and can record over 120 million readings from its temperature, pressure, accelerometer and wet/dry (optional) sensors over the life of the battery. It features independent pressure and temperature logging, allowing for flexible programming.

If your research involves studying diving birds and mammals you may be interested in our Dive Logging option. The wet switch/ depth threshold activation allows a pre-set fast-logging mode to be activated when the animal enters the water so that high temporal resolution dive profiles can be measured whilst retaining as much memory as possible for further dives/ time series data.

Robustness and reliability of Cefas Technology Limited products comes as standard. Please see below for a full technical specification.

Key Features	G7			
Tag Dimensions	**Length**	**Diameter**		
	62mm	15mm		
Saddle Dimensions	34mm x 29mm			
Weight in Air	16.7g (24.9 with Saddle)			
Weight in Seawater	6g (7.2 with Saddle)			
Memory				
Memory Options	115MB			
Typical Logging Rates [1] ***Logging both temperature & pressure @ 12-bit resolution***	**Logging rate**	**Time to fill memory (days)**		
	0.033 seconds [2]	6.2		
	0.1 seconds [2]	18.5		
	1 second	186		
	10 seconds	>730 [3]		
Accelerometer				
Absolute Tolerance (within Calibrated Temperature Range)	±0.2g			
Typical Tolerance (at full scale pressure and within Calibrated Temperature Range)	Within +/-0.4g			
Accelerometer Range (user-selectable)	±2g	±4g	±8g	±16g
Resolution (at 12-bit setting)	1mg	2mg	4mg	12mg
Depth Sensing				
Depth Sensors	10, 20, 50, or 100 bar			
Max Depth Before Pressure Sensor Failure	1.5 x Full Scale			
Accuracy (at 12-bit setting)	±1% of Full Scale			
Resolution (at 12-bit setting)	**10 bar sensor**	**20 bar sensor**	**50 bar sensor**	**100 bar sensor**
	Better than 4cm	Better than 8cm	Better than 15cm	Better than 30cm
Temperature Sensing				
Calibrated Temperature Range [4]	2°C to 34°C			
Accuracy (in calibrated range, at 12-bit setting)	±0.1°C			

Typical Temperature Response Time (5°C to 30°C)	**66% of temp change**	**90% of temp change**	**100% of temp change**
	76 seconds	171 seconds	528 seconds
Operating Temperature	-2°C to 40°C		
Absolute Temperature Range	-10°C to 60°C		
Resolution (at 12-bit setting)	0.03125°C		
Time Series Data Points			
Number of Data Points (*at User-Defined Resolution*)	**8-bit**	**10-bit**	**12-bit**
	121 million	96 million	80.3 million
Dive Logging Option Features			
Logging Rates	1Hz; 2Hz; 4Hz; 5Hz; 7Hz; 10Hz; 15Hz; 20Hz; 25Hz; 30Hz Adjustable dive-log depth threshold		
Wet/Dry Sensor	Enabled		
Additional Specifications			
Casing	Acrylic / Urethane		
Battery Chemistry	Lithium Manganese Dioxide		
Interface	Connected via CTL USB Interface		
Data Output	CSV Format (MS Excel etc)		
Software	DST Host – Windows OS (up to & including Windows 10)		

Notes :
1. Under normal operating conditions and based on logging continuously.
2. Logging at 10Hz unconditional fast-logging rate. Tags must have Dive-Logging feature activated to achieve this rate.
3. Limited by battery life expectancy
4. Accuracy degrades outside this range. Pressure readings are temperature compensated within this range.

Specifications mentioned in this document are subject to change without notice. This publication supersedes and replaces all information previously supplied.

Contact Us

Chris Challiss
Cefas Technology Limited
Pakefield Road
Lowestoft
Suffolk
NR33 0HT
UK

Tel +44 (0)1502 524443

Email info@cefastechnology.co.uk

Twitter @CefasTechnology

www.cefastechnology.co.uk