

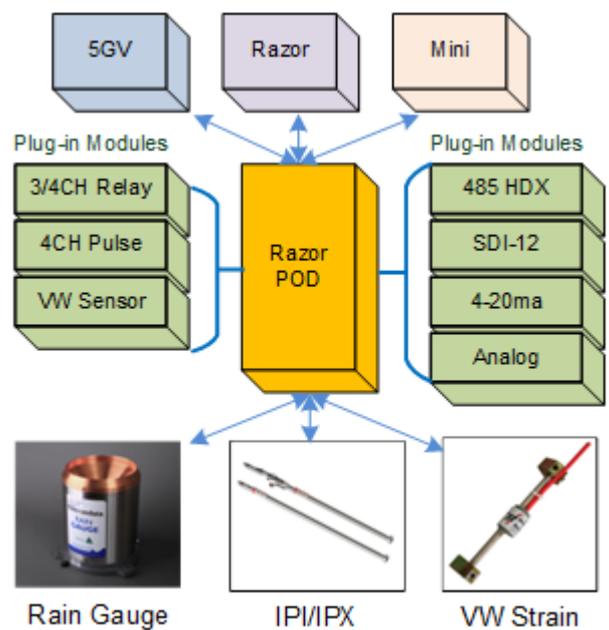
# GSS Pod

## Data you want, when you want it...

The GSS Pod is a versatile datalogger that supports plug-in modules that interface with various types of sensors including Vibrating Wire, RS-485, Pulse, Relay and others. The Pod leverages GSS gateway products such as 5GV, Razor or Mini for power and wireless communications. Up to 6 Pods can be daisy-chained to add more sensors. The Pod supports DIN rail mounting for quick and easy installation.

## Features

- Built in CPU, Memory and power management
- Externally powered from 5GV, Razor or Mini
- Remote firmware upgrade via above gateways
- Supports the following plug-in modules:
  - Vibrating Wire (Piezometers, Load Cells)
  - RS-485 / RS-422 (Multiple Channel IPI, IPX, Shape Arrays)
  - Pulse (Rain Gauges, Flowmeters)
  - Relay (Drives Klaxons, Warning Lights)
- No fuss wiring via 7-way Terminal Block and M16 cable entry gland
- Optional plug-in Memory Module (32Gb SRAM and 8GB MicroSD)
- 2 x M8 Connectors for Daisy Chaining Pods (Up to 6 Pods)
- Designed for quick and easy Installation / Removal
- DIN Rail Mounting Accessories



## Applications

- Structural Health Monitoring (Buildings, Bridges, Tunnels)
- Large Area and Long-Distance Monitoring (Construction Sites, Railways, Pipelines)
- Natural Slopes / Cut Slope Monitoring
- Barrier Impact Detection
- Foundation Monitoring
- Rainfall monitoring
- Audible and Visual alerting

# GSS Pod



General Specifications	
Part Numbers	POD-VW-01: Vibrating Wire Pod POD-485-01: RS-485 and RS-422 Pod POD-PUL-01: Pulse Pod POD-REL-01: Relay Pod
File Outputs	CSV, JSON
File Syntax	Customize record formats using keywords to add/remove values, adjust formatting etc.
Firmware Updates	Remotely upgradeable via Gateway (providing it has Internet access)
Management Access Port	Internal Micro-USB connection and virtual COM port
PC Software	Serial Terminal
Storage	Memory Module with Industrial MicroSD Card – 512MB (optional)
Time Keeping	Real-Time Clock, synchronised to Gateway time
Pod Modules	
Vibrating Wire Module	
Compatibility	Measures single-coil vibrating wire instruments from most manufacturers (e.g. piezometers, load cells, strain gauges, crack meters, extensometers)
Auto Detection & Configuration	<ul style="list-style-type: none"><li>Automatically detects &amp; configures sensors - identifies coils from 50 <math>\Omega</math> to 10 k <math>\Omega</math></li><li>Ability to manually override auto-detection configuration settings</li></ul>
Frequency Range	30Hz to 6,000Hz
Measurement Rate	~ 2Hz
Analog Output	Frequency value to current and voltage output, resolution up to 1/8000
Precision	0.05Hz ~ 0.25Hz
Measurement Modes	Scheduled measurement
Reading Frequency	From every 1 minute to 1 reading per day
Excitation Methods	<ul style="list-style-type: none"><li>Auto Scan Capability</li><li>Programmable high voltage excitation</li><li>Programmable frequency sweep</li><li>Intelligent frequency sweep</li></ul>
Signal Quality Evaluation	<ul style="list-style-type: none"><li>Sampling data quality evaluation algorithm</li><li>Signal amplitude detection</li><li>Signal quality evaluation</li></ul>
Temperature Detection	<ul style="list-style-type: none"><li>Thermistor DS18B20 core temperature detection</li><li>Internal</li><li>NTC in sensor</li><li>Voltage</li></ul>
Barometer	Internal
ADC	12-bit precision ADC converter
Reference Voltage	High-precision reference voltage
RS-485 & RS-422 Module	
Channels	Restricted to 64 addressable RS485 devices
Modes	Supports Half Duplex, Full Duplex RS475 comms and Profi-Bus
Pulse Module	
Channels	4 digital inputs
Interface	0 to 5V digital signal with 1Khz low pass filter
Predefined Sensors	ARG100 (rain gauge)

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<b>Relay Module</b>	
Channels	Configurable as 3 or 4 Channel module
Modes	<ul style="list-style-type: none"><li>• 4 x Channels with common ground</li><li>• 4 x Channels with common 5V</li><li>• 3 x Channels with user-defined common</li></ul>
Interface	Each channel can handle up to 40V at 2A (AC or DC)
Command Features	<ul style="list-style-type: none"><li>• Switch individual channels on and off</li><li>• Pulse individual channels for a specified duration and duty cycle</li></ul>
<b>Auxiliary Expansion Port</b>	
Gateway / Pod Daisy Chain	Pods have communication Input and Output channels where the Input connector is wired to the upstream device (or gateway) and the output channel to a downstream device. GSS gateways support up to 6 Pods in this manner.
<b>Accessories</b>	
Mounting Brackets	Support standard 35mm DIN brackets
Pod Cables	All Pods come with a 30cm cable standard to plug into a Gateway or daisy chain to the next Pod
<b>Operating Specifications</b>	
<b>Power &amp; Environmental</b>	
Operating Temperature	-40 °C TO +85 °C
Pod Dimensions and Weight	L:135m x W:40mm x H:34mm, 140g
Mini Dimensions and Weight	140g
<b>Connectors</b>	
Auxiliary	2 x 4-pin connectors with rubber caps
<b>Accessories</b>	
DIN Brackets	2-hole DIN brackets
Metal Caps	Metal IP67 caps for improved water ingress protection
30cm Cable	Standard length 4-pin cable
1m Cable	Extended length 4-pin cable