

## GS4 / GS6 IGNITERS

Designed to control normally aspirated, turbo-charged and lean-burn engines, running on LPG, natural gas and biogas, GS4/6 utilises the latest inductive ignition technology to ensure that engine emissions are kept to an absolute minimum. The igniters have been designed with the additional functionality required for the stationary gas engine market, and for more complex vehicle applications. Packed with useful features, reducing engine development and set-up times considerably.

### Features Include:

- Fully programmable via easy to use Windows® based GUI software
- Programmable for up to 6 cylinders
- Ignition point - fully programmable for load, speed, temperature and fuel type
- Flexible User Security Feature
- Fully programmable dwell with automatic supply voltage compensation for total control of spark energy and duration
- Factory configurable for Original Equipment Manufacturer engine timing disc patterns and sensors
- On-board visible status indicator
- Advanced diagnostics accessible via software interface

Utilising the latest inductive ignition technology, these igniters provide a powerful spark, with the long duration that only inductive technology can offer, enabling complete combustion of low calorific value fuels as well as lean air/fuel mixtures. This power ensures that engine performance and efficiency are maximized, whilst engine emissions are kept to a minimum. User-programmable via the Windows® software interface, these igniters provide extensive flexibility. With fully-programmable speed mapping and load mapping curves, you can expect to see improved engine efficiency, lower exhaust emissions, reduced engine maintenance and decreased engine operating costs. The programmed settings in a Gill ignition system are protected by a user security feature which ensures that only permitted personnel can amend them. This provides the user with the ability to configure engines for a specific requirement, with the peace of mind that once the engine has left his possession, changes to these settings can not be made.

As with all Gill igniters, installation couldn't be easier - designed to work with OEM timing disks and pickups, the Gill igniter range offers a fast and simple way to get your engine up and running and tuned for optimum performance.

## SM60 IGNITION COIL

Gill Instruments SM60 coils are designed to provide powerful and efficient spark ignition for normally aspirated or turbo charged, stoichiometric or lean burn gaseous fuelled engines up to approximately 2 litres (120 cubic inches) per cylinder.

Available with either threaded LT connections or an AMP sealed connector, SM60 coils are single, high efficiency, compact, dry coils designed to work with the Gill range of inductive igniters. They are fully encapsulated with no exposed core, providing robust spark ignition technology.

## ENGINE POSITION SENSORS

Engine position sensors come in three different configurations, standard, push-in and threaded, to give you additional flexibility.

With a robust design, easy to fit mountings and electrical connectors they are the number one choice for OEM purchasers worldwide.

## TIMING DISK

Gill can supply standard timing disks for 4 and 6 cylinder engines. Alternatively the igniter can be programmed to work with timing disks already fitted to the engine.

## WIRING HARNESS

Standard or customized wiring harnesses available for connecting the ignition system, coil primaries and engine position sensors. Available with fully water proof connectors.

## GS4 / GS6 IGNITER SPECIFICATIONS

Number of cylinders:	GS4: up to 4 cylinders GS6: up to 6 cylinders
Ignition point:	Fully programmable for engine speed, temp, and fuel type.
Timing maps:	Ten, programmable to 6,000 RPM.
Ignition/Fuel rev limits:	Programmable to 6,000 RPM.
Spark energy / duration:	Fully programmable dwell time with automatic voltage compensation.
Inputs:	TPS or MAP sensors for load. Temperature and fuel type. Depending on option either 2 inductive, 1 inductive and 1 hall, or 2 hall pickups can be accommodated.
Outputs:	Fuel valve drive via relay, tach/speed. On board status indicator.
Communications:	RS232
Power supply:	12V or 24V DC automatically sensed.
Environmental:	-40°C to +90°C, sealed to IP67

## SM60 COIL SPECIFICATIONS

Primary resistance:	0.5ohms nominal
Primary inductance:	2.5mH
Peak current:	10.5A at max dwell
Typical Spark Duration:	1000µs (at nominal dwell)
Spark energy:	>60mJ (at nominal dwell)
Secondary voltage:	35kV max
LT Connections:	Screw Terminal or AMP Superseal Connector SAE post
HT Connections:	

## ENGINE POSITION SENSORS SPECIFICATIONS

Resistance (Nominal):	575ohms
Working Gap:	2 mm nominal (with Gill Timing Disk)
Max Speed:	10,000 teeth/second
Connectors:	Various connectors available
Note:	Dimensions specified on individual data sheets.



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The Engine Control range is in continuous development and so the specification may be subject to change without prior notice



PB000805



# GS4/GS6 Ignition Systems

## For Mobile And Stationary Gas Powered Engines

# ENGINE CONTROLS



## COMPLETE IGNITION KIT INCLUDING IGNITER, COILS, PICK UP AND WIRING HARNESS

- ADVANCED CLOSED LOOP CONTROL
- MAINTENANCE FREE
- ROBUST CONSTRUCTION
- FULLY PROGRAMMABLE
- ADVANCED DIAGNOSTICS
- LEAN AND STOICHIOMETRIC
- 1-4 AND 1-6 CYLINDER ENGINES
- CHP ENGINES
- GENERATOR SET ENGINES
- COMPRESSOR ENGINES
- COMMERCIAL VEHICLE ENGINES
- FORKLIFT TRUCK ENGINES

[www.gill.co.uk](http://www.gill.co.uk)



# GS4/GS6 IGNITION SYSTEM SCHEMATIC

## GS4 AND GS6 IGNITION MODULES

Designed to control normally aspirated, turbo-charged and lean burn engines, running on LPG, natural gas and bio gas. The GS range utilises the latest inductive ignition technology to ensure that engine emissions are kept to an absolute minimum.

The GS4 and GS6 igniters have specifically been designed with the additional functionality required for complex vehicle and stationary gas engine markets.



GS6 Igniter



OR

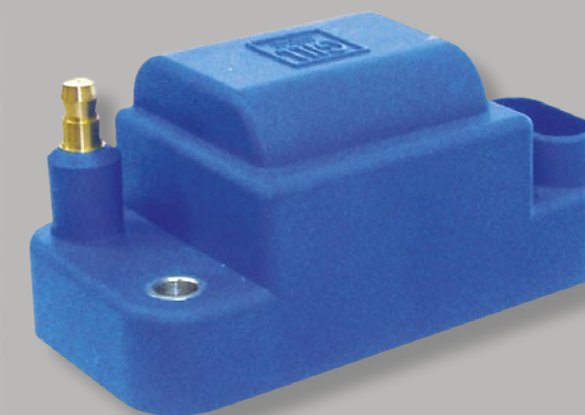
GS4 Igniter



## IGNITION COILS

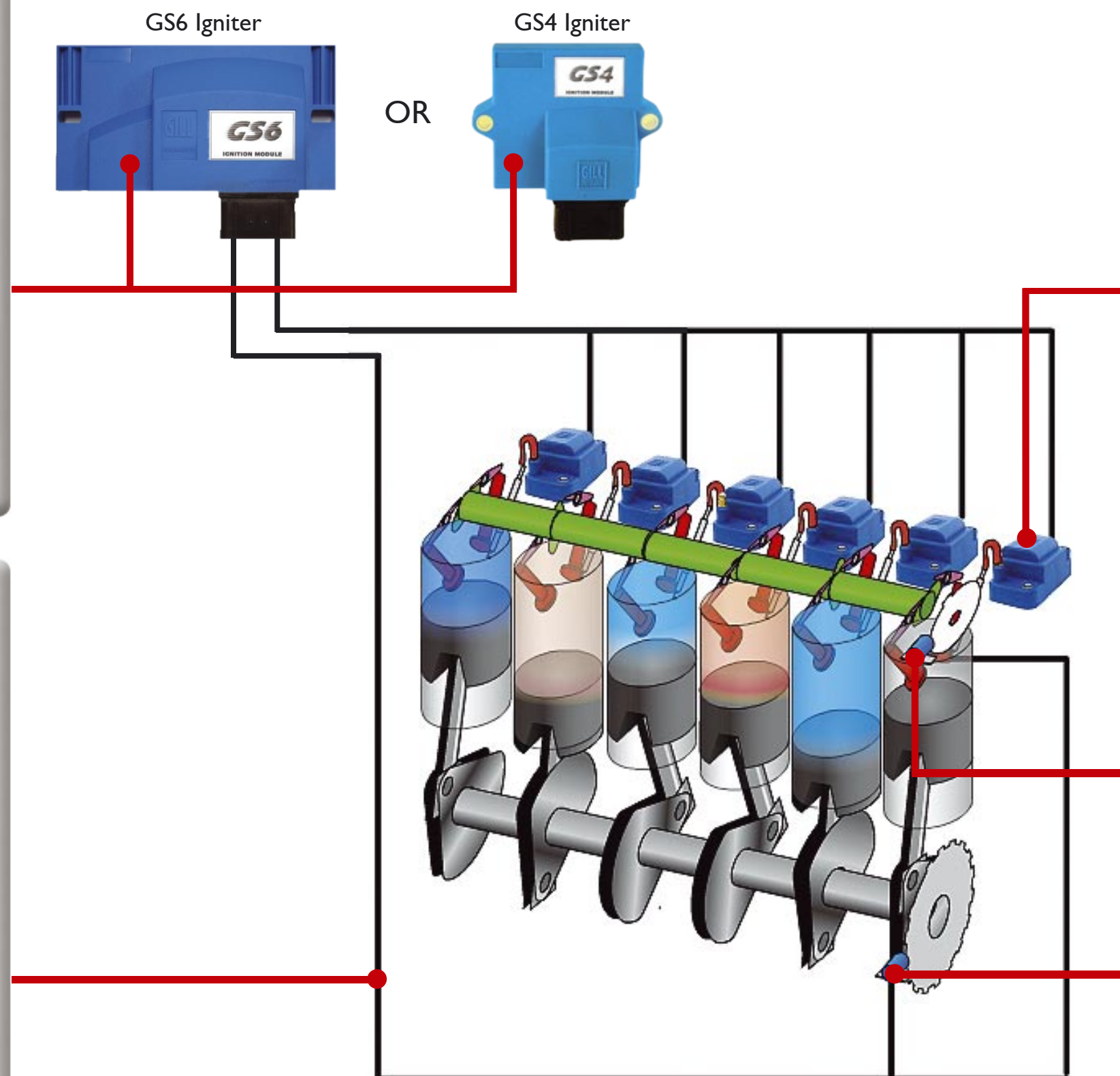
This ignition system can run either 1 - 4 (GS4) or 1 - 6 (GS6) ignition coils, and is designed to work with the Gill surface mount coils.

SM60 Surface Mount Ignition Coils



## WIRING HARNESS

Gill Instruments can supply a range of standard wiring harnesses for their engine controls products or can manufacture harnesses specifically for your application



## ENGINE POSITION SENSORS

These ignition modules are capable of running with one or two engine position sensors and can work with almost any arbitrary timing disk pattern(s) that may be fitted to the engine. Alternatively Gill can supply a standard timing disk which will work with the Gill range of inductive engine position sensors, or we can use sensors already supplied with the engine.



Push In Engine Position Sensor



Standard Engine Position Sensor



Threaded Engine Position Sensor

