



## GSS-2 'H-pattern' Gear Shift Sensor



- ◆ Enable traction control with your Type 9 gearbox and ECU\*
- ◆ Display the selected gear on your electronic dash display
- ◆ Minimal modification required
- ◆ Can be fitted without removing gearbox\*\*

With the **GSS-2 Gear Shift Sensor**, your car and Type 9 gearbox can have the same access to traction control and selected gear displayed as if you had a sequential gearbox. At a fraction of the price, as you shift gears the GSS-2 tells your Engine Control Unit (ECU) and dash display which gear is selected. Having this information, the ECU can control traction, based on knowledge of the gear selected, rather than just wheel speed.

In the high pressure environment of a rally car and, indeed, any competition car, having the gear selection displayed to the driver can save valuable time and improve overall performance.



The GSS-2 module fits in the Type 9 gearbox extension housing and is wired to the car's ECU via a waterproof connector. A minor modification is required to the gear lever/selector rod coupling and the ECU or digital display gear selector voltage settings may need to be adjusted in order to read and display the selected gear correctly .



The unit is simple to install and comes complete with connecting cable and full instructions.

Ford Type 9 gearbox also known as 'N' type

\* The GSS-2 can only assist traction control if your ECU has a Traction Control facility

\*\* Access required to remove the gear lever and fit GSS-2 unit through extension housing end



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# GSS-2 'H-pattern' Gear Shift Sensor

## Technical Specifications

### Dimensions (mm)

GSS-2 module	64w x 35d x 22h
connecting cable	180

Weight (without extension cable) 40gm

Power supply 5Vdc, 20mA max. See note 1 below.

### Output signal ECU settings

	nominal	lower	upper
reverse	0.31	0.24	0.43
neutral	1.1	0.92	1.22
first	1.73	1.57	1.82
second	2.35	2.18	2.45
third	2.98	2.80	3.14
fourth	3.59	3.41	3.76
fifth	4.06	3.92	4.22
sixth (optional)	4.69	4.59	4.84

Connector type 4-pin ITT Sureseal

#### Pin connections

1	+5V (+5V dc ECU reference voltage)
2	ground
3	signal to ECU traction control gear input
4	gearbox reverse light switch (optional) - see note 2 below.

#### Notes:

1. DTA and MBE ECUs provide a +5 Volt dc reference supply for TPS, MAP and other sensors but have sufficient spare current capacity for the GSS-2. If using another manufacturer's ECU, you should check with them **first** that their device can supply the necessary current as it may be damaged or malfunction if the current limit is exceeded. The GSS-2 must **NOT** be connected to any supply voltage higher than 5 Volts dc or it will be damaged.

2. Later vehicles use 2-terminal reversing light switches that are connected to a) +12V and b) the reversing lights. Connector pin 4 should be connected to the same terminal as the lights, NOT +12V as the sensor will think you're permanently stuck in reverse!

On older vehicles, reversing light switches may be of the single terminal type that switch the reversing light wire to 0V (chassis) and require an additional single pole relay for correct functioning of the GSS-2.

Detailed instructions for either type of connection are included with the GSS-2

If the reverse gear function is not required, pin 4 can be left unconnected.