



WIRING SCHEMATIC  
FOR S60PRO

LAST UPDATED 2/6/06

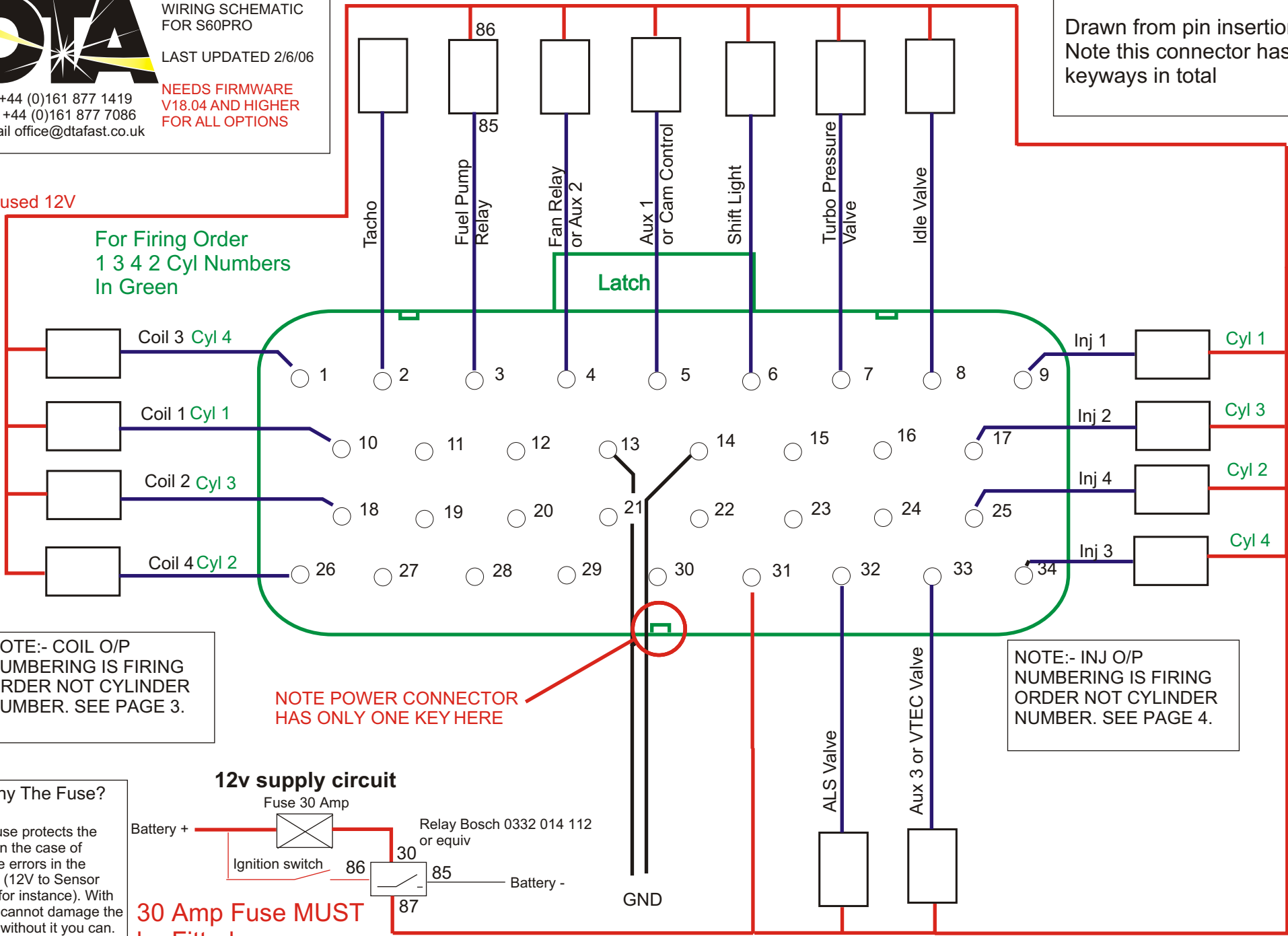
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**NEEDS FIRMWARE  
V18.04 AND HIGHER  
FOR ALL OPTIONS**

**S60PRO Power Connections**  
Drawn from pin insertion side  
Note this connector has Three  
keyways in total

Fused 12V

For Firing Order  
1 3 4 2 Cyl Numbers  
In Green

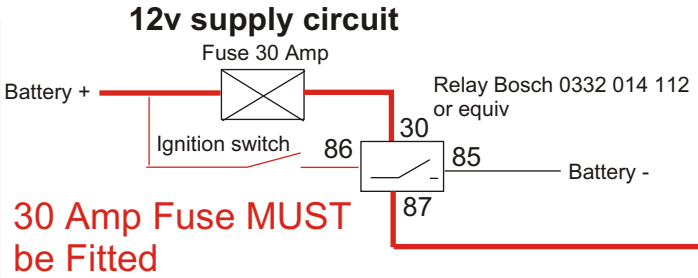


NOTE:- COIL O/P  
NUMBERING IS FIRING  
ORDER NOT CYLINDER  
NUMBER. SEE PAGE 3.

NOTE POWER CONNECTOR  
HAS ONLY ONE KEY HERE

NOTE:- INJ O/P  
NUMBERING IS FIRING  
ORDER NOT CYLINDER  
NUMBER. SEE PAGE 4.

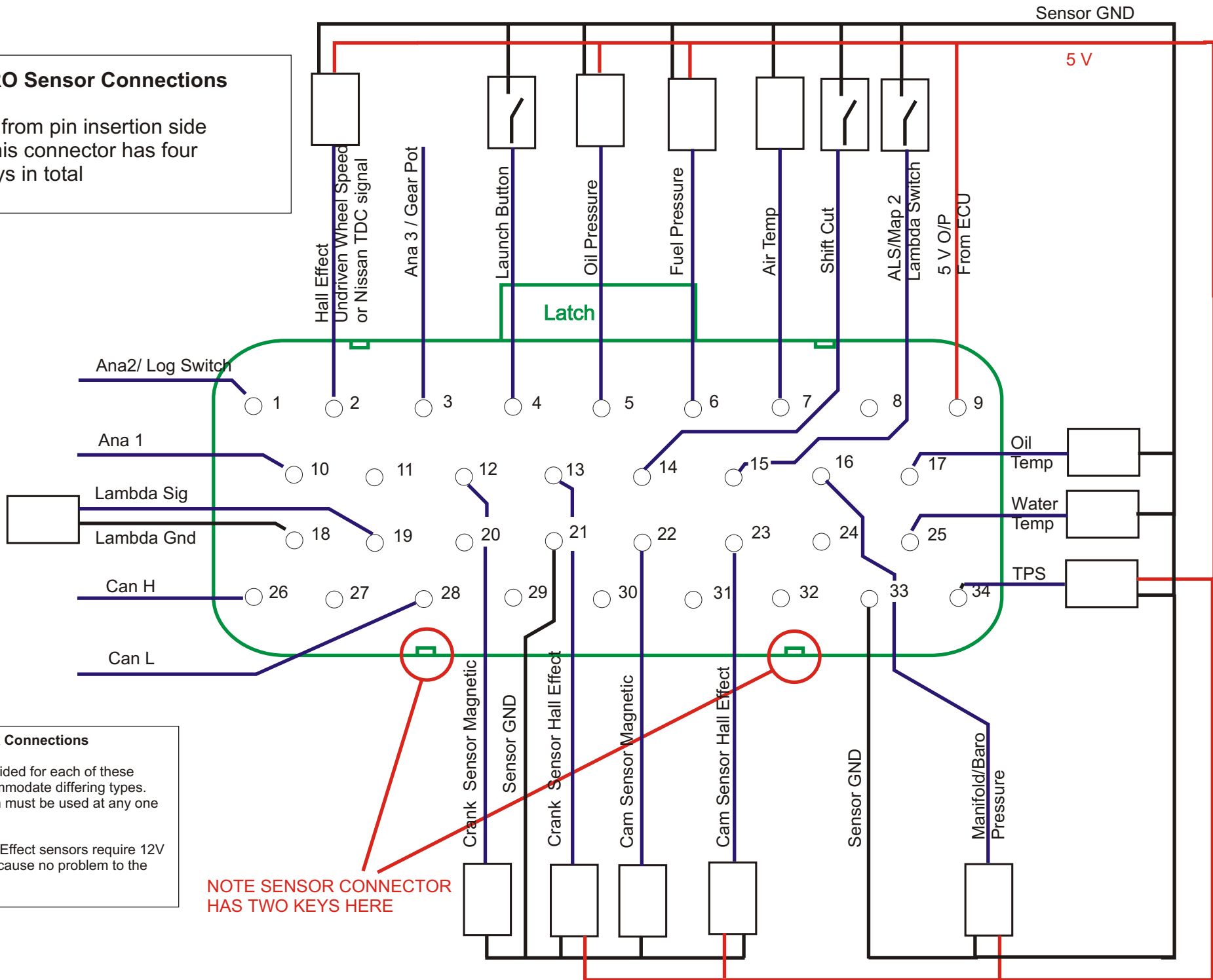
**Why The Fuse?**  
The fuse protects the ECU in the case of severe errors in the wiring (12V to Sensor GND for instance). With it you cannot damage the ECU, without it you can. The choice is yours.



Fused 12V

### S60PRO Sensor Connections

Drawn from pin insertion side  
 Note this connector has four keyways in total



### Cam And Crank Connections

2 inputs are provided for each of these sensors to accommodate differing types. Only one of each must be used at any one time.

Some OEM Hall Effect sensors require 12V supply. This will cause no problem to the ECU.

NOTE SENSOR CONNECTOR HAS TWO KEYS HERE

## Sensor Connections

### Crank sensor connections

Use twisted pair wire with overall screen for crank sensor

#### VR sensor pin outs (magnetic)

##### Ford inc Duratec

Pin 1 to pin 12

Pin 2 to Sensor GND

Shield to Sensor GND at ECU

##### Vauxhall/Opel/BMW/Volvo/Saab/ etc. (Bosch & Siemens)

Pin 1 to pin 12

Pin 2 to pin Sensor GND

Pin 3 to shield to Sensor GND at ECU

##### Marelli

Pin 2 to pin 12

Pin 1 to Sensor GND

Shield to Sensor GND at ECU

### Manifold Pressure Sensors

GM Map

A = Sensor GND

B = Signal

C = 5 Volt

Bosch Map 0261 230 004

1 = 5 Volt

2 = GND

3 = Signal

Marrelli Map

A = 5V

B = Sensor GND

C = Signal

### Throttle pot

Connect 5 v to side to which throttle wiper goes at full open

any value 500 Ohm to 20 K Ohm

Colvern (Jenvey) pot

red = wiper

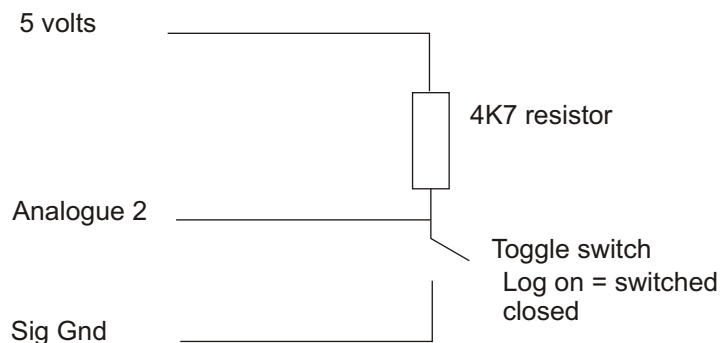
green = 5v

yellow = Sensor GND

All 5 volt and Sensor Gnd connections are equivalent (except Lambda Gnd). Use the ones which are most suitable for the sensors connected. If not using twisted pair wire, twist together separate wires a pitch of approx. 2.5 cm

### ANALOGUE 2 WIRING FOR LOG SWITCH

If using the analogue 2 input for switching the log on and off use the following wiring.



### Serial Port Connections

1 -> 1

2 -> 2

3 -> 3 9 - 15 pin (Dyno Control Box uses the rest)

4 -> 4

5 -> 5

### Flash Programming Switch

8

13

### Output Driver Limitations

All Auxilliaries Unless otherwise stated 1 Amp

ALS Valve 4 Amp

Aux 3 4 Amp

Injector Drivers 4 Amp

Coil Drivers 9 amp

## Coil Wiring

### Coil Per Plug

Remember that the outputs are numbered in firing sequence, that is 1 is the first to fire, 2 the second etc. For a 4 cylinder with a firing sequence of 1/3/4/2 connect wires as below. A cam sensor MUST be fitted for coil per plug operation.

Cyl	1	3	4	2
O/P	1	2	3	4

And similarly for 6 or 8 cylinder engines.

### Wasted Spark

Use the lowest outputs. For a 6 cylinder engine with a firing order of 1/3/6/4/5/2 wire as below.

Cyl	1	3	6
Cyl	4	5	2
O/P	1	2	3

### Distributor

Use Coil output 1..

### Twin Spark

Coil O/P's 1 to 2 work as normal. Coil O/P's 3 to 4 are the matching second plug. For a 4 cylinder, wasted spark,, twin spark wire as below.

Cyl	1 & 4	2 & 3	First Plug
O/P	1	2	

Cyl	1	3	Second Plug
O/P	3	4	

Four cylinder cylinder wasted spark is the maximum for twin spark operation.

## Injector Wiring

**Note all injectors must be high impedance types or use a ballast resistor.**

### Sequential

Remember that the outputs are numbered in firing sequence, that is 1 is the first to fire, 2 the second etc. For a 4 cylinder with a firing sequence of 1/3/4/2 connect wires as below.

Cyl	1	3	4	2
O/P	1	2	3	4

A cam sensor MUST be fitted for sequential injection.

### Non Sequential

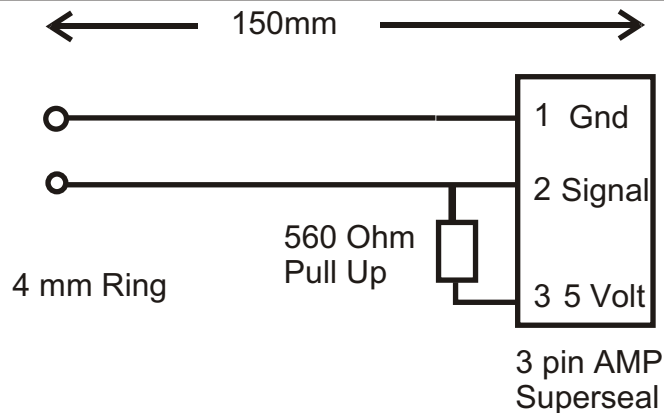
Use O/P's 1,2,3 & 4 to any injector

### Non Sequential Twin Injector

Injectors 1:- Use O/P's 1,2. Wire equal numbers of injectors on each if possible

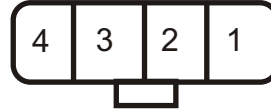
Injectors 2:- Use O/P's 3,4. Wire equal numbers of injectors on each if possible.

### VDO Pressure Adapter Connections



## Special Nissan Connections

Connections for combined Nissan/Denso Cam Shaft mounted sensor system.  
Engine codes RB25, RB26, RB20.  
General Engine Settings, Flywheel Mode 5



- 1 - TDC Signals - White
- 2 - 360 degree signal - Green
- 3 - +5V - Red
- 4 - Signal GND - Black

**Note:- It is important that the TDC signal is connected to Pin 2, Undriven wheel speed on the ECU sensor connector, not the normal Cam input.** Connect 360 degree signal to normal hall effect crank shaft sensor input Pin 13

**The connector is drawn looking at the sensor output.**



This sensor comes in 4 and 6 cylinder versions, either is acceptable.

## Special Nissan Connections

Connections for combined Nissan/Denso Cam Shaft mounted sensor system.  
Engine Code SR20.  
General Engine Settings, Flywheel Mode 8

**We have seen various connectors on this one but the wire colours are always the same**

- 1 - TDC Signals - White
- 2 - 360 degree signal - Green
- 3 - +5V - Red
- 4 - Signal GND - Black

**Note:- It is important that the TDC signal is connected to Pin 2, Undriven wheel speed on the ECU sensor connector, not the normal Cam input.** Connect 360 degree signal to normal hall effect crank shaft sensor input Pin 13



This sensor comes in 4 and 6 cylinder versions, either is acceptable.

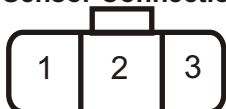
## Honda K20A

### LOAD K20A MAP BEFORE CONNECTING COILS

#### General Engine Settings, Flywheel Mode 7.

Connect Inlet Cam Sensor to Pin 2, Undriven Wheel Speed. Exhaust cam sensor to normal cam input, Pin 23. Crank to Pin 13.

All drawn looking at the sensor/actuator  
**Sensor Connections**



#### Crank and Cam Sensor

Pin 1 = Signal  
Pin 2 = Sensor GND  
Pin 3 = 12V

#### TPS

Pin 1 = Sensor GND  
Pin 2 = Signal  
Pin 3 = 5V

#### MAP

Pin 1 = 5V  
Pin 2 = Signal  
Pin 3 = Sensor GND

#### Power Connections

##### Idle Valve

Pin 1 = GND  
Pin 2 = 12V  
Pin 3 = Signal

#### Coil Connections



Pin 1 = Signal  
Pin 2 = GND  
Pin 3 = 12V

**Connect VTEC Valve to AUX3**

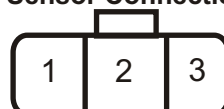
## Honda F20C (S2000)

### LOAD S2000 MAP BEFORE CONNECTING COILS

#### General Engine Settings, Flywheel Mode 9.

Connect exhaust cam sensor to normal cam input, Pin 22. Crank to Pin 12.

All drawn looking at the sensor/actuator  
**Sensor Connections**



#### Crank Sensor

Pin 1 = Signal  
Pin 2 = Sensor GND  
Pin 3 = Shield

#### Ex. Cam Sensor (2 pin)

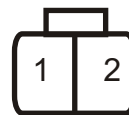
Pin 1 = Signal  
Pin 2 = GND

#### TPS

Pin 1 = Sensor GND  
Pin 2 = Signal  
Pin 3 = 5V

#### MAP

Pin 1 = 5V  
Pin 2 = Signal  
Pin 3 = Sensor GND



#### Power Connections

##### Idle Valve

Pin 1 = GND  
Pin 2 = 12V  
Pin 3 = Signal

#### Coil Connections



Pin 1 = Signal  
Pin 2 = GND  
Pin 3 = 12V

**Connect VTEC Valve to AUX3 Via Relay**

## Honda B16 & B18 Distributor

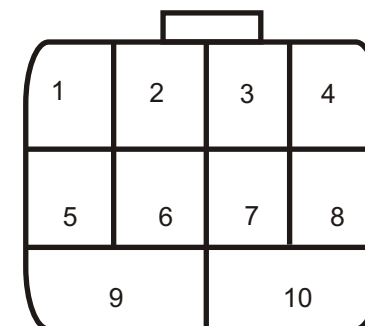
#### General Engine Settings, Flywheel Mode 6.

Connect cam sensor to cam input, Pin 22. Crank to Pin 12.

**Requires Firmware V17.02 or Higher**

All drawn looking at the sensor/actuator

#### Distributor Connections



#### Crank Sensor

Pin 2 = Signal  
Pin 6 = Sensor GND

#### Cam Sensor

Pin 8 = Signal  
Pin 4 = Sensor GND

#### Coil Trigger

Pin 1

#### Tacho

Pin 9

#### 12V

Pin 10

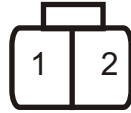
**Connect VTEC Valve to AUX3 Via Relay**

### Suzuki GSXR 1000 K5 & K6

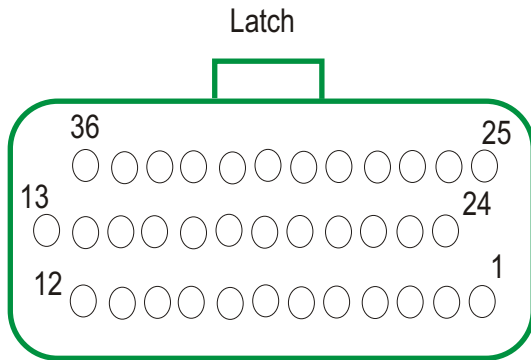
All drawn looking at the sensor/actuator

Crank Sensor

Pin 1 Signal (Black)  
Pin 2 GND (Green)



### Rover 1800 K VVC Connector Pin Outs



Drawn From ECU Side of Loom Connector  
on Vehicle

### Rover 1800 K VVC Loom to S60

Rover Red Connector                      S60 Pin

1 Cam+	22 Sensor
2 Cam-	21 Sensor
9 Tacho Out	2 Power
12 INJ 1	9 Power
13 INJ 2	25 Power
14 INJ 3	17 Power
25 Crank+	12 Sensor
26 Crank-	21 Sensor
27 Lambda+	19 Sensor
28 Lambda-	18 Sensor
35 INJ 4	34 Power

Rover Black Connector                      S60 Pin

2 VVC inc	33 Power
8 MAP 5V	9 Sensor
10 Oil Temp	17 Sensor
12 TPS Sig	34 Sensor
13 Sensor GND	23 Sensor
14 Air Temp	7 Sensor
15 Water Temp	25 Sensor
18 TPS 5 V	9 Sensor
20,21,22,33 See Below	
23 VVC Decrease	5 Power
25 Coil 2	18 Power
26 Coil 1	10 Power
27 +12V	31 Power
28 Fan 1	4 Power
30 Fuel Pump	3 Power
36 MAP Sig	16 Sensor

Ignition Relay Black Con.                      Relay

20 & 21	85 & 87
22	30
33	86

S60 Power Con Pins 13 & 14 To Bat Negative