

NTK L1H1

Lambda Sensor Input in Scal - Pin assignments needs to be Set to Lam1V or Lam2v, Lambda Heater Needs to be assigned to a Fuel Output

| Lambda Pin Number | Colour | Name | S8 Pin |
|-------------------|--------|---------------------|-----------------|
| 1 | Yellow | Heater | 56, 57 |
| 2 | Orange | Heater Drive | Any Fuel or Pwm |
| 6 | Red | Nernst Cell Voltage | 18, 45 |
| 7 | White | Ion Pump Current | 75, 76 |
| 8 | Black | Signal Ground | 77 |

NTK L2H2

| Lambda Pin Number | Colour | Name | S8 Pin |
|-------------------|--------|---------------------|-----------------|
| 1 | Yellow | Heater | 56, 57 |
| 2 | Blue | Heater Drive | Any Fuel or Pwm |
| 6 | Grey | Nernst Cell Voltage | 18, 45 |
| 7 | White | Ion Pump Current | 75, 76 |
| 8 | Black | Signal Ground | 77 |

BOSCH LSU4.2

Lambda Sensor Input in Scal - Pin assignments needs to be Set to Lam1V or Lam2v, Lambda Heater Needs to be assigned to a Fuel Output

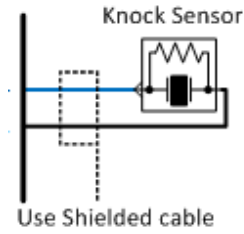
| Lambda Pin Number | Colour | Name | S8 Pin |
|-------------------|--------|---------------------|-----------------|
| 1 | Black | Nernst Cell Voltage | 18, 45 |
| 2 | Green | Cal Resistor | |
| 3 | Grey | Heater 12v | 56, 57 or 12v |
| 4 | White | Heater Drive | Any Fuel or Pwm |
| 5 | Yellow | Signal Ground | 77 |
| 6 | Red | Ion Pump Current | 75, 76 |

BOSCH LSU4.9

| Lambda Pin Number | Colour | Name | S8 Pin |
|-------------------|--------|---------------------|-----------------|
| 1 | Red | Ion Pump Current | 75, 76 |
| 2 | Yellow | Signal Ground | 77 |
| 3 | White | Heater Drive | Any Fuel or Pwm |
| 4 | Grey | Heater 12v | 56, 57 or 12v |
| 5 | Green | Cal Resistor | |
| 6 | Black | Nernst Cell Voltage | 18, 45 |

Knock Sensor

Syvecs S8 has two Knock inputs for a piezoelectric Example Schematic



Pin Schedule

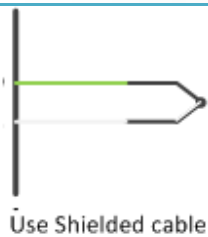
| Pin Number | Function | Notes |
|------------|----------------|-------|
| 35 | Knock 1 Signal | |
| 7 | Knock 2 Signal | |
| 65 | Knock Grounds | |

NOTE: Shield wires should be connected only at one end, common practice is to join shielding wires at the ECU end of the loom and connect them to a Power Ground wire.

EGT/Thermocouple

Syvecs S8 has 2 K-type thermocouple inputs.

Example Schematic



Pin Schedule

| Pin Number | Function | Notes |
|------------|----------|---------------------|
| 70, 13 | THER+ | Green wire (K-type) |
| 40, 12 | THER- | White wire (K-type) |

Driven/Output Connections

Ignition

The ignition channels are logic level outputs and IGBT designed to control ignition coils via an additional igniter (Power transistor) or Direct. These outputs can be used to drive up to 10A Peak / 5A Continuous if driving a IGBT Coil, 40ma is TTL

Adjusting the Ignition Output control is found under I/O Configuration in Scal

Pin Schedule

| Pin Number | Function | Notes |
|------------|----------|---------------------------------|
| 27 | IGN1 | Logic Level (5V) output OR IGBT |
| 26 | IGN2 | Logic Level (5V) output OR IGBT |
| 25 | IGN3 | Logic Level (5V) output OR IGBT |
| 24 | IGN4 | Logic Level (5V) output OR IGBT |
| 5 | IGN5 | Logic Level (5V) output OR IGBT |
| 4 | IGN6 | Logic Level (5V) output OR IGBT |
| 3 | IGN7 | Logic Level (5V) output OR IGBT |
| 2 | IGN8 | Logic Level (5V) output OR IGBT |

Fuel Outputs

The Injection channels on the S8 are able to Drive High Impedence injectors Only. When using Low Impedence injectors we suggest a Ballast pack or use our 6 Channel Peak and Hold Driver.

Fuel Outputs also have full pulse width modulation available. These outputs can be used to drive up to 10A Peak / 5A Continuous and can only pull to ground.

Pin Schedule

| Pin Number | Function | Notes |
|------------|----------|------------------------|
| 54 | Fuel1 | Injector Output or PWM |
| 53 | Fuel2 | Injector Output or PWM |
| 52 | Fuel3 | Injector Output or PWM |
| 51 | Fuel4 | Injector Output or PWM |
| 23 | Fuel5 | Injector Output or PWM |
| 50 | Fuel6 | Injector Output or PWM |
| 22 | Fuel7 | Injector Output or PWM |
| 49 | Fuel8 | Injector Output or PWM |
| 34 | Fuel9 | Injector Output or PWM |
| 6 | Fuel10 | Injector Output or PWM |
| 33 | Fuel11 | Injector Output or PWM |
| 32 | Fuel12 | Injector Output or PWM |
| 31 | Fuel13 | Injector Output or PWM |
| 30 | Fuel14 | Injector Output or PWM |
| 20 | Fuel15 | Injector Output or PWM |
| 47 | Fuel16 | Injector Output or PWM |

Half Bridge Outputs

An **H bridge** is an electronic circuit that enables a voltage to be applied across a load in either direction. These circuits are often used to drive Electronic Throttle bodies applications to allow DC motors to run forwards and backwards.

18

Half Bridge Outputs also have full pulse width modulation available and can be driven to 12v or Ground

These outputs can be used to drive up to 10A Peak / 5A Continuous

Pin Schedule

| Pin Number | Function | Notes |
|------------|-----------|--------------------------------|
| 58 | H-Bridge1 | Can be driven to 12v or Ground |
| 59 | H-Bridge2 | Can be driven to 12v or Ground |
| 60 | H-Bridge3 | Can be driven to 12v or Ground |
| 61 | H-Bridge4 | Can be driven to 12v or Ground |