



Specialist Components Typhoon

Engine Management System

www.specialist-components.co.uk Not for use on Public Highway

Pin	Name	Description	Notes
1	VBATT	Battery Voltage Direct	Direct Battery Power 6-15V
2	VKEY	Ignition Key Input	Switched Ignition Feed
3	GROUND	Power Ground	
4	INJ1	Injector 1	5A Protected Output
5	INJ2	Injector 2	5A Protected Output
6	INJ3	Injector 3	5A Protected Output
7	INJ4	Injector 4	5A Protected Output
8	DIG_GND	Crank/Cam Sensor Ground	Digital Ground
9	CRANK	Crank Sensor	Hall effect or Variable Reluctance input
10	CAM1	Inlet Camshaft Sensor Bank 1	Hall effect or Variable Reluctance input
11	TCOOL	Coolant Temp Input	0-5V Analog Input
12	TAIR	Air Temp Input	0-5V Analog Input
13	IGN1	Power or TTL Ignition Coil 1	Hardware selected output type
14	IGN2	Power or TTL Ignition Coil 2	Hardware selected output type
15	IGN3	Power or TTL Ignition Coil 3	Hardware selected output type
16	IGN4	Power or TTL Ignition Coil 4	Hardware selected output type
17	LINEAR1	Analogue Input 1	User Configurable 0-5V Analog Input
18	CAM2	Inlet Camshaft Sensor Bank 2	Hall effect or Variable Reluctance input
19	NTC_GND1	Temp Sensors Ground	Analog Ground
20	LAMBDA1	Lambda Sensor Bank 1	0-5V Analog Input
21	CANH	CAN High	To PC comms DB9
22	CANL	CAN Low	To PC comms DB9
23	PROG	Program Enable	To PC comms DB9
24	RELAY1	Relay Output	User Programmable Relay Function
25	RELAY2	Fuel Pump Relay Output	Relay Output (Fuel Pump & O2 Heater Relay)
26	PWM1	Pulse Width Modulated Output 1	User Configurable Output Function, 5A Protected Output
27	PWM2	Pulse Width Modulated Output 2	User Configurable Output Function, 5A Protected Output
28	AUX1	Auxiliary Output 1	5A Protected Output
29	AUX2	Auxiliary Output 2	5A Protected Output
30	LINEAR_GND1	TPS & MAP Ground	Analog Ground
31	NTC_1	NTC Sensor Input 1	Temperature Sensor Input
32	TPS1	Throttle Position Sensor Input 1	0-5V Analog Input
33	MAP	Manifold Pressure Sensor Input	0-5V Analog Input
34	VREF1	TPS & MAP Reference Voltage	5V Reference
35	GROUND	Power Ground	

AMPSeal Plug Assembly 776164-1, Terminal Pins 770520-3 (available from www.mouser.com)

PC Comms DB9 Female Connector

Pin	Name
1	Ground
6	CAN High
7	CAN Low
3	Program Enable

User Configurable Outputs

Pin Number	Name	Function Options	Notes
15	IGN3	Ignition Channel 3 Rover VVC1	Rover K series
16	IGN4	Ignition Channel 4 Tachometer Rover VVC2	6 cylinder wasted spark Rover K series
24	RELAY1	Main Relay Control Air Conditioning Clutch Relay Control Cooling Fan Relay Control	
26	PWM1	Idle Control Valve Boost Control Valve Chargecooler Pump Relay Control Headlight Flasher Coolant Gauge PWM Bosch 3 wire idle air valve open Shift Light/VTEC Variable Cam Timing	VANOS Inlet Increment or Inlet VVT Bank 1
27	PWM2	Idle Control Valve Boost Control Valve Chargecooler Pump Relay Control Headlight Flasher Speedometer Output Coolant Gauge PWM Bosch 3 Wire Idle Air Valve Close Shift Light/VTEC Variable Cam Timing	VANOS Inlet Decrement or Inlet VVT Bank 2
28	AUX1	Tachometer Output Injector 5	6 & 8 cylinder
29	AUX2	Cooling Fans Relay Output Injector 6 Shift Light/VTEC Variable Cam Timing Output	6 & 8 cylinder

User Configurable Inputs

Pin Number	Name	Function Options	Notes
10	CAM1	Non-VVT Cam Sensor Ford ST170 VCT Inlet Cam Sensor Honda K20 iVTEC Inlet Cam Sensor BMW S54 VANOS Inlet Cam Sensor Renault Clio 197 VVT Cam Sensor Rover K Series VVC Cam Sensor Toyota 2ZZ/1ZZ VVT-I Cam Sensor Cyclone V6 Inlet Bank 1 Cam Sensor Mazda MZR VVT Cam Sensor Jaguar V8 VVT Bank 1 Cam Sensor	VR or Hall Effect VR Hall Effect Hall Effect Hall Effect VR VR VR Hall Effect Hall Effect
17	LINEAR1	Oil Pressure Sensor Input Fuel Pressure Sensor Input Launch Control Switch Pit Lane Limiter Switch	0-5V Analog Input 0-5V Analog Input Ground To Activate Ground To Activate
18	CAM2	Wheel speed input Honda K20 TDC Sensor BMW S54 Exhaust Cam Sensor Cyclone V6 Inlet Bank 2 Cam Sensor Jaguar V8 VVT Bank 2	VR or Hall Effect Hall Effect Hall Effect VR Hall Effect
31	NTC_1	Oil Temperature Sensor Input Pit Lane Limiter Switch Gear Cut Switch	NTC Ground To Activate Ground To Activate

Crank Position Sensor Connections

Use twisted pair cable with overall screen for crank position sensor connections

VR (Electromagnetic Sensors)

Pin Number	Ford (all except Sierra Cosworth)
1	Signal
2	Sensor Ground Shield to Sensor GND at ECU
Pin Number	Vauxhall/Opel/BMW/Volvo/Saab/etc - Bosch & Siemens
1	Signal
2	Sensor Ground
3	Shield Ground (to Sensor Ground at ECU)
Pin Number	Magneti Marelli SEN8D (and Ford Sierra Cosworth)
1	Sensor Ground
2	Signal Shield to Sensor GND at ECU



CRANK

