

MoTeC M84 ECU

Basic specifications

Inputs

- 8 x Analogue Voltage Inputs:
 - Throttle Position
 - Manifold Pressure
 - Mass Air Flow
 - Fuel Pressure
 - Oil Pressure
 - Exhaust Temperature
 - Gear Position
 - User 1
- 3 x Analogue Temperature Inputs:
 - Air Temperature
 - Coolant Temperature
 - User 2
- 3 x Switched AT inputs
- 2 x Lambda Inputs (supports wideband and narrowband sensors)
- 4 x Digital Inputs (wheel speed or switch)
- Internal Temperature Sensor

Outputs

- 8 x Low ohm peak and hold injector outputs
- 6 x Ignition outputs
- 8 x Aux outputs

Communications

- 1 x CAN bus
- 1 x RS232

Data Logging

- Memory size 512 Kb
- Maximum sample rate 100 Hz
- Number of channels: 16 + diagnostics



The **MoTeC M84** is a programmable Engine Control Unit and data logger. It provides superior control of ignition, fuel injection and turbo boost plus optional functions such as Traction Control, Boost Enhancement (Anti-Lag) and Gear Change Ignition Cut. An advanced diagnostics system, data logging and on board Wideband Lambda sensor control are included to allow for accurate tuning and fast identification of faults.

The M84 is configured using a dedicated, Windows based ECU Manager which provides easy access to all tuning parameters.

Features

- Small and light in robust aluminium enclosure
- Flexible tuning software
- Programmable injector drive characteristics
- Programmable input system for Ref/Sync.
- Programmable trigger levels
- Ref/sync capture
- Comprehensive diagnostics
- Configurable Auxiliary Outputs with PWM capability
- Data Logging
- Wideband Lambda control

Physical

- Dimensions 147 x 105 x 40mm
- Weight 500g
- 1 x 34pin and 1 x 26pin plastic connector
- Internal Temperature Range: -10 to 80 degrees Celsius

Other information

Compatibility

- CAN based accessories e.g.
 - MoTeC Dash Loggers
 - MoTeC MDD Mini Digital Display
 - LTC (Lambda to CAN)
 - PLM (Professional Lambda Meter)
 - SLM (Shift Light Module)

PC Requirements

- Windows: XP, Vista, 7
- USB port or parallel port

PC Connection

- MoTeC UTC via USB port
- MoTeC CAN Cable via parallel port

Accessories

- MoTeC UTC
- MoTeC CAN Cable
- Connector 34pin
- Connector 26pin

User Manual and Software

Latest versions available from
www.motec.com.au/downloads

Upgrades

- Dual Wideband Lambda
- Secondary Injection (Hi-Lo)
- Over-run Boost Enhancement (anti-lag)
- Gear Change Ignition Cut (flat shift)
- Traction Control
- Advanced Functions (Includes Secondary Injection, Over-run Boost Enhancement, Gear Change Ignition Cut and Traction Control)

Software

- M84 ECU Manager (Windows based, used for tuning, diagnostics and configuration)
- MoTeC i2 Standard (used for analysis of logged data)

Connector and Pinout

Connector A

34 pin waterproof connector
Mating connector

Pin	Name	Function
1	AUX2	Auxiliary Output 2
2	5V-ENG	Sensor 5V
3	IGN1	Low Side Ignition 1
4	IGN2	Low Side Ignition 2
5	IGN3	Low Side Ignition 3
6	IGN4	Low Side Ignition 4
7	IGN5	Low Side Ignition 5
8	IGN6	Low Side Ignition 6
9	5V-AUX	Auxiliary 5V
10	Ground	Battery Negative
11	Ground	Battery Negative
12	8V-ENG	Sensor 8V
13	8V-AUX	Auxiliary and CAN 8V
14	AV1 TP	Throttle Position Input
15	AV2 MAP	Manifold Pressure Input
16	AV3 MAF	Mass Air Flow Input
17	AV4 FP	Fuel Pressure Input
18	AUX1	Auxiliary Output 1
19	INJ1	Injector 1
20	INJ2	Injector 2
21	INJ3	Injector 3
22	INJ4	Injector 4
23	AUX3	Auxiliary Output 3
24	AUX4	Auxiliary Output 4
25	AV5 OP	Oil Pressure Input
26	V BAT	Battery Positive
27	INJ5	Injector 5
28	INJ6	Injector 6
29	INJ7	Injector 7
30	INJ8	Injector 8
31	AUX5	Auxiliary Output 5
32	AUX6	Auxiliary Output 6
33	AUX7	Auxiliary Output 7
34	AUX8	Auxiliary Output 8

Connector B

26 pin waterproof connector
Mating connector

Pin	Name	Function
1	REF	Crank Reference Input
2	SYNC	Cam Sync Timing Input
3	AT1 AT	Air Temp input
4	AT2 ET	Engine Temp input
5	AT3 User2	User Analog Temp Input
6	AT4 SW	Switch Input 4
7	AT5 SW	Switch Input 5
8	DIG1	Left Drive Speed
9	DIG2	Right Drive Speed
10	DIG3	Left Ground Speed
11	DIG4	Right Ground Speed
12	LA2-S	Lambda2 Sensor input
13	LA2-P	Lambda2 Pump Current
14	0V-Comms	Comms 0V
15	0V-AUX	Auxiliary 0V
16	0V-ENG	Sensor 0V
17	TX-232	RS232 Transmit Data
18	RX-232	RS232 Receive Data
19	AT6 SW	Switch Input 6
20	AV6	Analog Voltage Input 6
21	AV7	Analog Voltage Input 7
22	AV8	Analog Voltage Input 8
23	CAN_HI	CAN Comms High
24	CAN_LO	CAN Comms Low
25	LA1-S	Lambda1 Sensor Input
26	LA1-P	Lambda1 Pump Current