

EM40



Description

Compact, user programmable engine management system for up to twelve cylinder sequential applications.

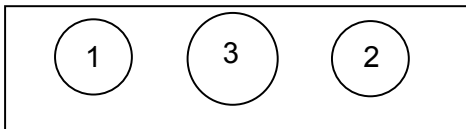
Specifications

Parameter	Value
Operating Voltage	7V – 28V
Power Consumption	≈ 170mA at 12V
Outputs	
6 x 8Amp	2 x Dedicated Ignition, 4 x Multi purpose ignition/fuel
8 x 3Amp	Multi purpose fuel/idle/pump 6 of these can be used as PWM/Injector outputs.
Bridge driver	8Amp Peak
Fuel Pump	
Tacho	
Shift Light	
Idle Motor	
Total Outputs	20
Total High Side	2
Inputs	
Throttle	Potentiometer
9 x Analogue Inputs	10Bit
2 x Battery Voltage	Internal
2 x VR/Hall Effect Speed Inputs	Can also be used and 10bit analogue inputs
2 x Hall Effect Speed Inputs	Can also be used and 10bit analogue inputs
Knock	Signal 5-15KHz
Internal Temp Sensor	-55 to 125 °C
Data-Logging	
Memory	512KB
Max Rate	250Hz
Communications	
CAN	CAN 2.0, Configurable Telemetry 50Khz to 1Mhz
2 x Serial	RS232, RS422
Connectors	
	3 x Autosport
Size (mm)	153 x 101 x 35
Weight (g)	394
Casing	Die cast Aluminium

Connector Details

ID	Connector	Loom Side Connector
1	AS010-98PN	AS610-98SN
2	AS010-98PD	AS610-98SD
3	ASDD012-41PN	ASDD612-41SN

From Front



Pin Out

Connector		1	
Pin	Name	Function/Notes	Software Name
1 (A)	PERM Feed (Battery +)		ADR17
2 (B)	IGN 1		IGN1
3 (C)	IGN 2	Dual Purpose Ignition/Fuel	IGN 6 / Fuel 12
4 (D)	FUEL 1	Dual Purpose Ignition/Fuel	IGN 4 / Fuel 10
5 (E)	RTN (Floating) (Battery -)		
6 (F)	FUEL 2	Also PWM2	Fuel 2 / PWMDTY2

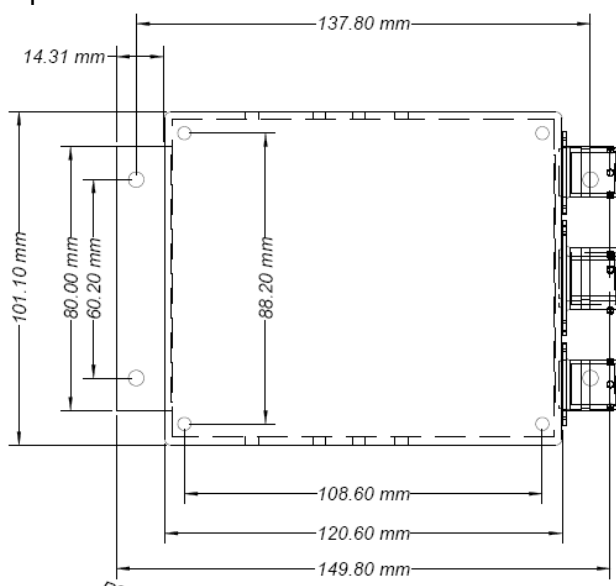
Connector		2	
Pin	Name	Function/Notes	Software Name
1 (A)	PWR Feed (Battery +)		ADR07 / Battery Volts
2 (B)	IGN 3		IGN 2
3 (C)	IGN 4	Dual Purpose Ignition/Fuel	IGN 3 / Fuel 9
4 (D)	FUEL 3	Dual Purpose Ignition/Fuel	IGN 5 / Fuel 11
5 (E)	RTN (Floating) (Battery -)		
6 (F)	FUEL 4	Also PWM4	Fuel 4 / PWMDTY4

Connector		3	
Pin	Name	Function/Notes	Software Name
1	HALLPWR	Or high side driver	Highside1
2	TIMING GND		
3	HALL SENSOR SIGNAL 1	Speed Input T1	ADR12 / Crank Voltage / A Tooth
4	HALL SENSOR SIGNAL 2	Speed Input T2	ADR13 / Cam#1 Voltage / T2 Period
5	PWR RTN	RTN (Floating) (Battery -)	
6	SENSOR PWR	5V	
7	TPS (Signal)		ADR00 / TPS Voltage
8	0V		
9	AIR TEMP		ADR04 / Air Temp Voltage
10	COOLANT TEMP		ADR05 / Coolant Voltage
11	ROTOR AIR IN TEMP	Speed Input T3 or Analogue	ADR14 / Cam#2 Voltage
12	ROTOR AIR OUT TEMP	Speed Input T4 or Analogue	ADR15 / Road Speed Voltage
13	ANA GND		
14	KNOCK		ADR16 / Knock / Knock In Voltage
15	KNOCK GND		
16	ANA GND		
17	SENSOR PWR	5V	
18	ANALOGUE INPUT		ADR1 / Map Voltage
19	ANALOGUE INPUT		ADR6 / Bay Temp Voltage
20	ANALOGUE INPUT		ADR3 / Oxygen Raw
21	ANALOGUE INPUT		ADR10 / O2 #2 Voltage

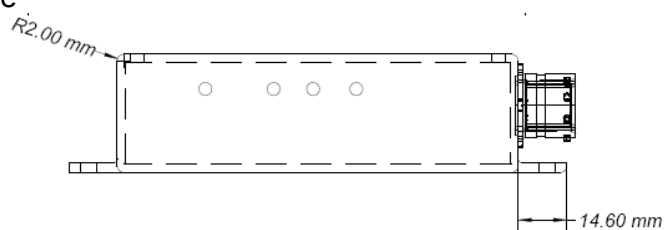
22	TACHO OUTPUT		
23	Error/Shift Light	Or high side driver	Highside2
24	Low Side Driver		Map1 Out
25	OIL PUMP		PWM 7 / Fuel 7
26	Timer Output Compare 7	Can be used for Main Relay	TOC7
27	BRIDGE 1 (+)		Act T / PWM1 / PWM3
28	IDLE3		PWM6 / Fuel 6
29	IDLE4		PWM8 / Fuel 8
30	BRIDGE 2 (-)		Act / PWM1 / PWM3
31	FUEL PUMP		PWM5 / Fuel 5
32	DRIVER PWR RTN		
33	CANL		
34	CANH		
35	COMS RX (RS-232)		
36	COMS TX (RS-232)		
37	COMS (GND)		
38	BUSB (RS-422)		
39	BUSA (RS-422)		
40	BUSZ (RS-422)		
41	BUSY (RS-422)		
N/A	Internal Baro Sensor		ADR11

Dimensions

Top



Side



Front

