

ENGINE CONTROL UNIT

SRD-160

Selectable GDI/DIESEL Peak&Hold injector
injector
DBW control

Description

SRD-160 is a dedicated Engine Control Unit. A single unit can drive up to six injectors Peak&Hold selectable GDI or DIESEL from custom CMP560. Single unit can drive up to six ignition coils. SRD-160 can also drive logic command coils (SW option).

Communication from the PC based configuration tool and to other units (such as dashboard and logger) is by the 2 CAN lines.

Inside the unit there is a high performance RISC microcontroller and an FPGA for diagnostic purposes.

SRD-160 provides analogue inputs for single-ended, temperature and knock-sensor as well as an interface for a switching lambda sensor. The unit also provides an H-Bridge output stage for use with suitable "Drive by Wire" actuators.

6 configurable speed sensor inputs (inductive or Hall) provide full flexibility of configuration for engine angle detection as well as other frequency inputs such as wheel or shaft speed.

SRD-160DL8/16 is a version of the SRD-160 with an internal 8/16 Mbyte data logger.

SRD-160 is supplied with the mating connector (loom side).

Main Features

- 10 Single-ended
- 6 Pick-ups or Hall effect
- 6 Inductive or logic command ignition drivers (SW option)
- 6 Peak&Hold injector drivers selectable GDI or Diesel
- 1 H-Bridge: DC-Motor driver for "Drive by Wire" control
- 4 PWM (Current controlled PWM)
- 1 Linear Lambda Sensor ILIOS
- 2 Knock input for detonation control accelerometers
- 2 CAN communication buses
- 1 Ethernet line



Benefits

- SW selectable GDI/DIESEL Peak&Hold injector drivers
- Flexible setup by means of a high number of Inputs/Outputs
- The logic command coils option is available on request
- SW selectable NTC/PT1000 temperature sensors
- Floating point data management
- Direct management of Marelli dashboard display
- Compatible with a wide range of professional Marelli software tools
- Easy to install

Typical Applications

One make race series

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Technical Characteristics

Inputs

Analogue Single-ended	10
Linear Lambda sensor (LIOS).....	1
Knock sensor (multiplexed).....	2
K-type thermocouple	2
NTC/PT1000 temperature sensor (selectable)	5
NTC internal temperature sensor	1
V battery injector	1
VR Pick-ups or Hall effect	6
On/Off digital	7
Lap Trigger.....	1
“Code Load” enable pin	1

Outputs

Peak&Hold Injector drivers Selectable GDI or Diesel.....	6
Inductive or logic command ignition drivers (SW option) ..	6
H-Bridges	1
Lambda heater drivers	1
PWM	4
Low-side On/Off	7
Output Led	2
Voltage references.....	2

Communications

CAN line (1 Mbit/s (*)).....	2
Ethernet line (100 Mbit/s).....	1
(*) Configurable on request	

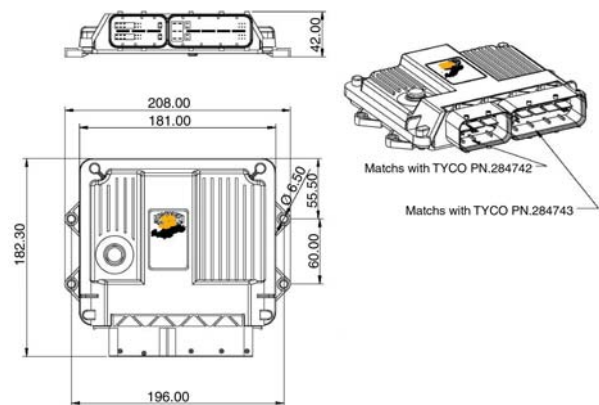
Logic Core

Microcontroller (80 MIPS RISC).....	1	
FPGA (50k gates)	1	
Flash E2PROM (microcontroller)	1	Mbyte
RAM memory (microcontroller)	48	Kbyte
RAM memory	512	Kbyte
E2PROM parallel	64	Kbyte
E2PROM serial	4	Kbyte
Time keeper	1	
CMP controller injector Peak&Hold.....	2	

Other Characteristics

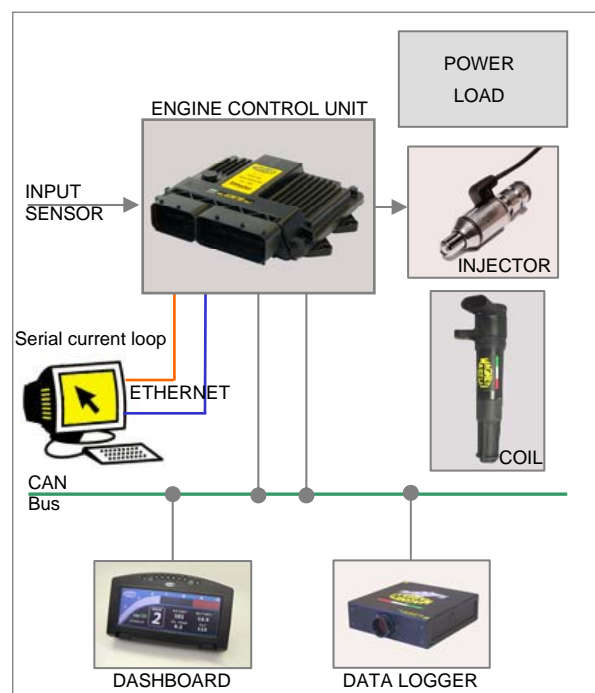
Power supply	6 to 16	V
Operating temperature range (internal)	-20 to 85	°C
Protection class.....	IP 65	
Dimensions		
with connectors.....	208 x 182.30 x 42	mm
Weight (approx.)	1030	g

Dimensions



Dimensions in millimetres

Application Schematics



For further information, please contact:



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