LANDIRENZO OMEGAS EVO OBD (2-3-4 CYLINDER)

LANDIRENZO OMEGAS EVO OBD is an electronic ECU (2-3-4 cylinder) that manage the supply of gas on vehicles with multipoint injection systems. The ECU uses various signals from the petrol injection ECU (see “Operating Principle“ section) to recalculate the right fuel metering for the vehicle, to manage the switch from petrol to gas and vice versa in the event of running out of gas.
Through to the communication with the OBD protocol, it can reads some parameters from the original petrol ECU to adapt the system in order to compensate the drifts and the aging of the Gas components.
The OBD connection also allows the monitoring of various engine parameters directly from the calibration software and any errors in the engine control system.
It features an auto-diagnostic system and manages changing back to petrol in the event of a fault.

SIGNALS FROM THE ENGINE

- Petrol injection times
- Radiator coolant temperatures
- Intake manifold vacuum readings
- Lambda probe
- Engine speed
- Battery voltage
- OBD

SIGNALS FROM GAS SYSTEM COMPONENTS

- Gas pressure
- Gas temperature
- Fuel level sensor

GOVERNING GAS SYSTEM COMPONENTS

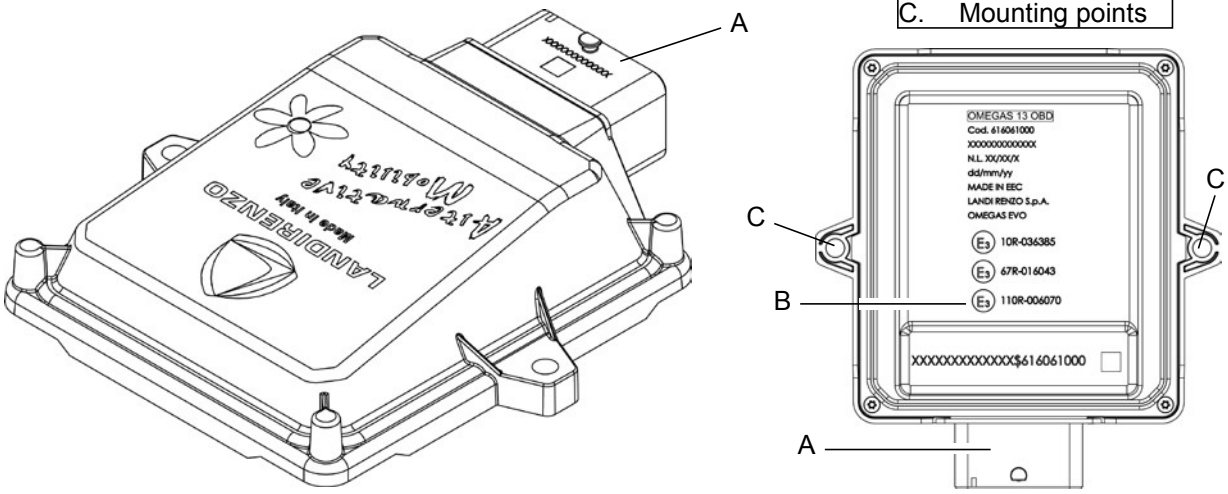
- Fuel switch
- Fuel level indicator
- Regulator solenoid - solenoid(s) tank(s)
- Gas injectors

FUNCTIONS

- Deactivation and emulation of petrol injectors
- External relay control for fuel pump disconnection (it is possible using an EV output)
- Diagnostic
- Separate front EV and rear EV control
- OBD communication (CAN and Line K)
- References to petrol correctors for self-activity
- SW Dedicated Remote Assistance future gas Tools world devices

EVO OBD

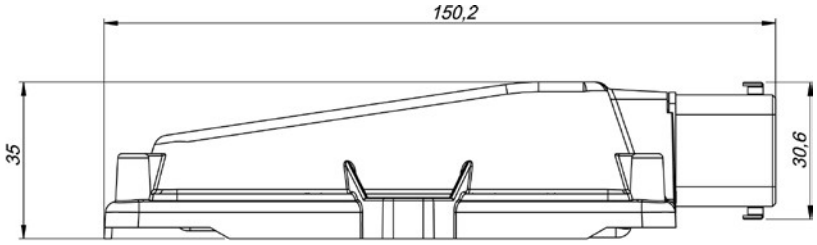
A. Connector
B. Homologation
C. Mounting points



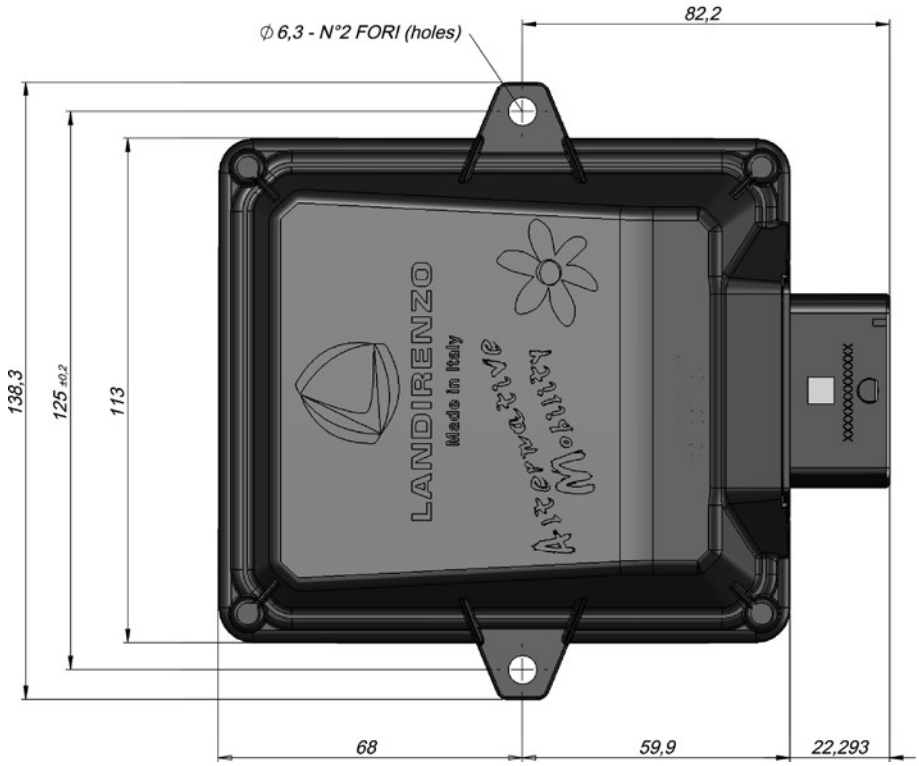
TECHNICAL DATA

GAS TYPE AND NUMBER OF CYLINDERS:	LPG, CNG - 2÷4 CIL
CASE	TECHNOPOLYMER
SUPPLY VOLTAGE:	10 ÷ 16 V
MAX CURRENT WITH ACTUATORS OFF:	≤ 0.5 A
STANDBY MAX CURRENT :	≤ 50 µA
DRIVER INJECTORS:	4
SOLENOID VALVES OUTPUT:	2
MAXIMUM CURRENT (FOR SINGLE OUTPUT):	2A*
FLASH MEMORY:	128 kb
PROCESSOR SPEED (pll):	25 MHz
WEIGHT	196 g
DIMENSION:	134x152x36 mm
WORKING TEMPERATURE:	-40°C ÷ 110°C
CLASS IP :	IP54
ECU CONNECTOR:	48 PIN
HOMOLOGATION:	E3 10R-036385 - E3 67R-016043 - E3 110R-006070

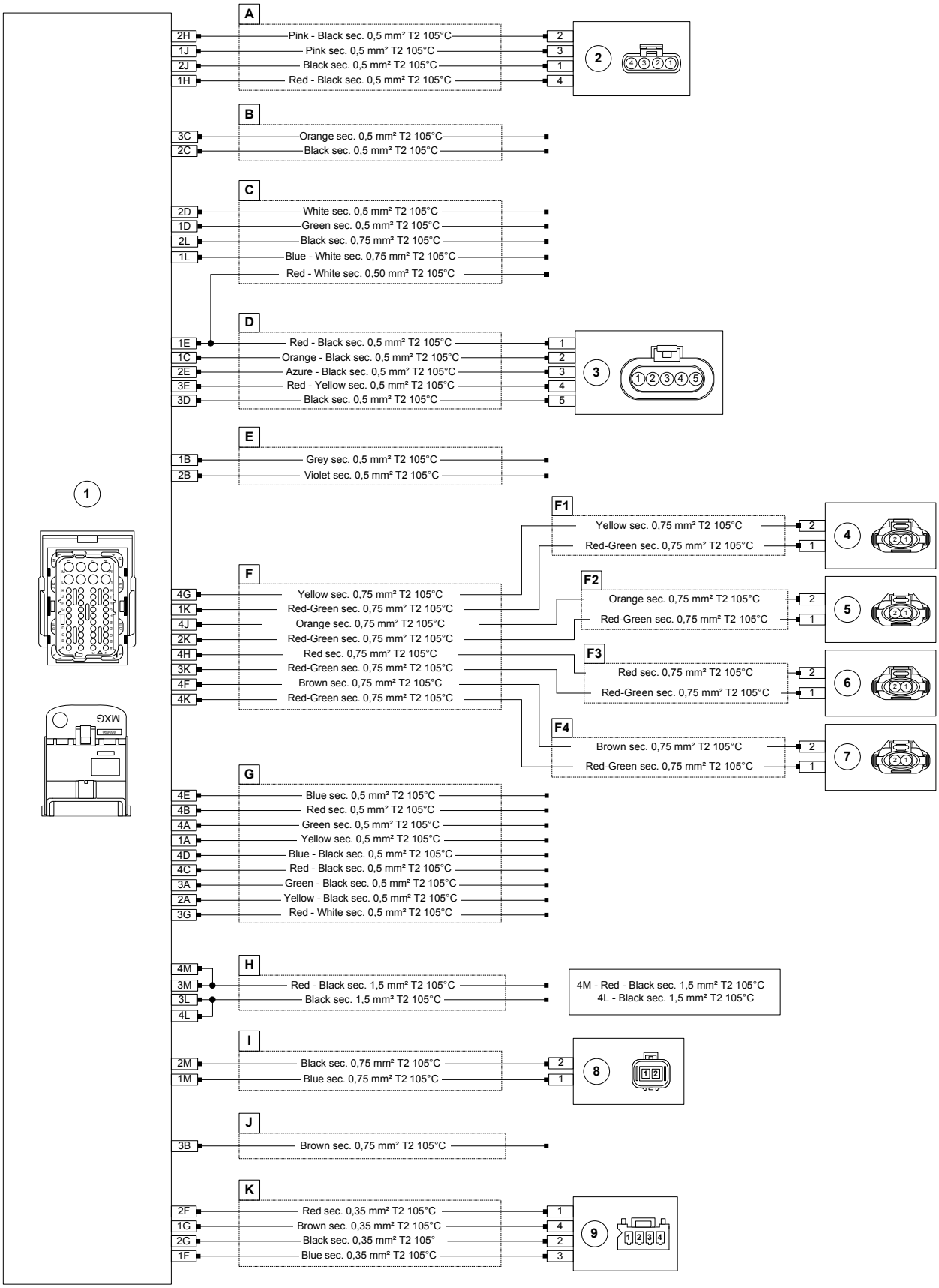
* in case of more solenoids, use relay harness kit (e.g. KF 387 AEB) or additional flow relays suited to the current required.



EVO OBD



LANDIRENZO EVO ECU PIN-OUT (2-3-4 CYLINDER)



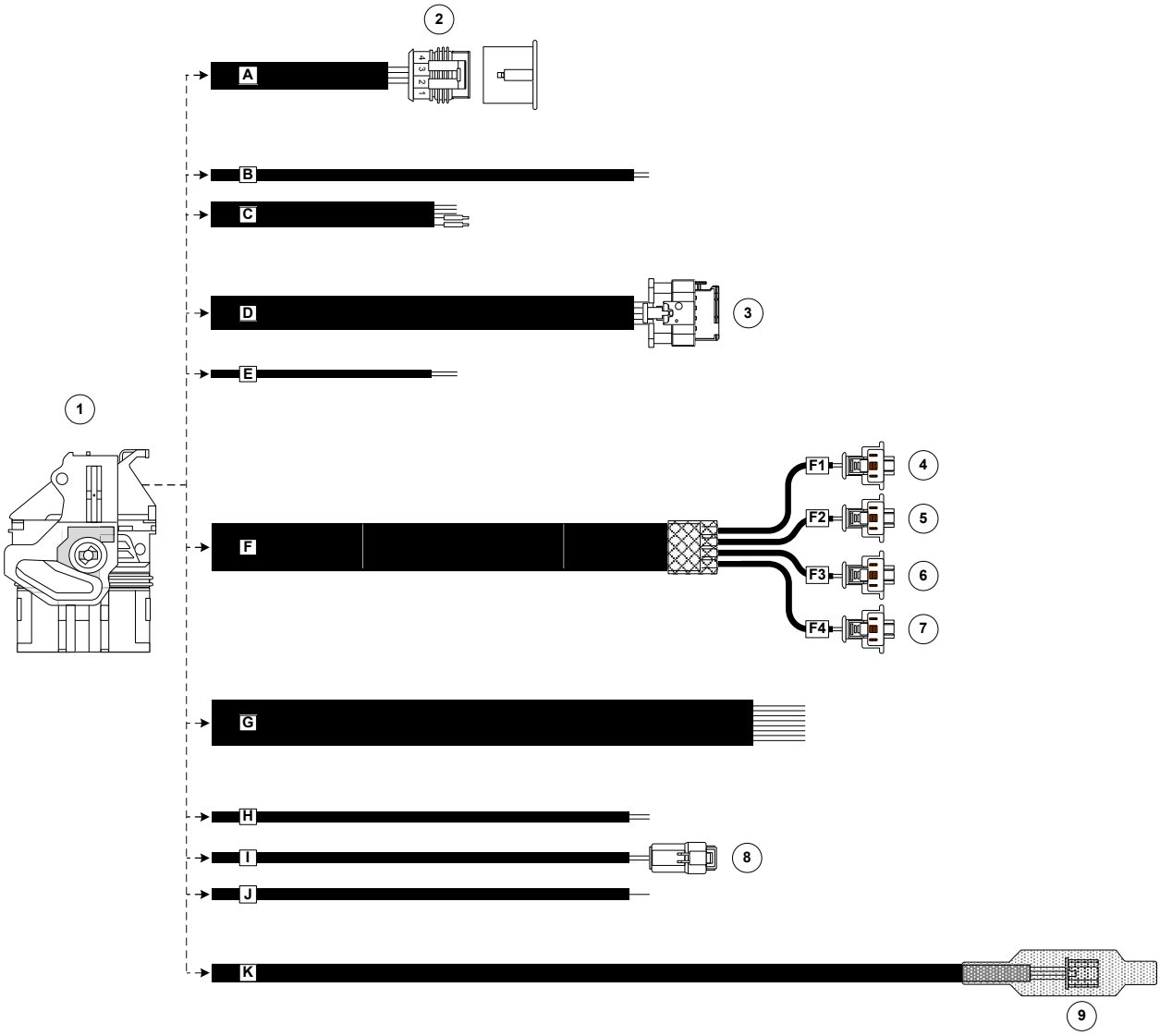
PIN	Description
1A	Injector B 4 cut-out (INJ side)
1B	Lambda probe emulation
1C	Gas temperature signals
1D	Fuel level
1E	Pressure sensor power supply
1F	P/G/P command switch
1G	RPM signals for switching fuel
1H	Diagnosis power supply
1J	Transmission of diagnosis data
1K	Alim. Iniettore gas n°1
1L	Power supply Gas injector N° 1
1M	Regulator solenoid positive

PIN	Description
2A	Injector B 4 cut-out (ECU side)
2B	Lambda probe input signal
2C	Temperature sensor negative
2D	Fuel level
2E	Gas pressure input signal
2F	Switch positive (5v)
2G	Switch negative
2H	Receipt of diagnosis data
2J	Diagnostics negative
2K	Power supply Gas injector N° 2
2L	Tank solenoid negative
2M	Regulator solenoid negative

PIN	Description
3A	Injector B 3 cut-out (ECU side)
3B	Engine RPM signal
3C	Temperature signal
3D	Temperature negative
3E	MAP signal input
3F	Battery negative
3G	Ignition (15)
3H	-
3J	-
3K	Gas injector 3 power supply
3L	Battery negative
3M	Battery positive

PIN	Description
4A	Injector B 3 cut-out (INJ side)
4B	Injector B 2 cut-out (INJ side)
4C	Injector B 2 cut-out (ECU side)
4D	Injector B 1 cut-out (ECU side)
4E	Injector B 1 cut-out (INJ side)
4F	Injector G 4 signal
4G	Injector G 1 signal
4H	Injector G 3 signal
4J	Injector G 2 signal
4K	Power supply Gas injector N° 4
4L	Battery negative
4M	Battery positive

LANDIRENZO OMEGAS ECU EVO OBD LAYOUT (2-3-4 CYLINDER)



REF.	COMPONENTS
1	N.1 48-way connector code 64320-3311 series CMC MOLEX code AEB 741001026 provided in subcontracting N.1 Cap code 64320-1301 series CMC MOLEX code AEB 741001027 provided in subcontracting N.4 F-Terminal code 64322-1019 series CP0,6 sec. 0,35 mm² N.28 F-Terminal code 64322-1039 series CP0,6 sec. 0,5 mm² N.8 F-Terminal code 64322-1029 series CP0,6 sec. 0,75 mm² N.4 F-Terminal code 64323-1029 series CP1,5 sec. 0,5 mm² / 1 mm² N.4 F-Terminal code 64323-1039 series CP1,5 sec. 1 mm² / 2 mm² N.1 Plug for open cavity code 0643251010 series CP0,6
2	N.1 4-way connector code AEB 741001037 N.4 F-Terminal code 282403-1 series S.SEAL sec. 0,3 mm² / 0,5 mm² N.4 Grommet code 281934-4 series S.SEAL - Green - sec. 0,35 mm² / 0,5 mm²
3	N.1 5-way connector code AEB 741001040 provided in subcontracting N.5 F-Terminal code 1452668-1 series MCP sec. 0,5 mm² / 0,75 mm² N.8 Grommet code 967067-1 series MQS - Green - sec. 0,5 mm² / 0,75 mm²
4 - 5 6 - 7	N.4 2-way connector code AEB 741001070 N.8 F-Terminal code 1703034-1 TYCO sec. 0,5 mm² / 1 mm² N.8 Grommet code 828904-1 series JPT TYCO sec. 0,3 mm² / 1 mm²
8	N.1 2-way connector code 211PC022S0049 series SICMA FCI. N.2 F-Terminal code 211CC2S1160T series SICMA3 FCI sec. 0,35/0,75 mm²
9	N.1 4-way connector code PAP-04V-S series PA JST N.4 F-Terminal code SPHD-001T-P.05 JST sec. 0,13 mm² / 0,35 mm²