

Engine Control Unit MS 15.2



- ▶ 6 injection output stages
- ▶ For Piezo injectors
- ▶ 60 data inputs

The MS 15.2 is an ECU for Diesel engines with up to 6 cylinders. It is developed for use with Bosch Piezo injectors.

Application

Engines with the following numbers of cylinders are supported:	3, 4, 5, 6, < 3 on request
Injector type	Piezo injectors
Control strategy	Quantity based
Injection timing	2 pilot injections 1 main injection 1 post injection
Turbo boost control	Single or Bi-Turbo
Lambda measurement	
Traction control	Optional
Gear cut for sequential gearbox	
Speed limiter	
Optional function packages available	
Interface to Bosch Data Logging System	
Max. vibration	Vibration profile 1 (see Appendix or www.bosch-motorsport.com)

Technical Specifications

Mechanical Data

Aluminum housing
4 connectors in motorsport technology with high pin density, 187 pins
Vibration damped circuit boards

8 housing fixation points	
Size	210 x 199 x 36 mm
Protection Classification	IP67 to DIN 40050, Section 9, Issue 2008
Weight	1,780 g
Temperature range	-20 to 85°C

Electrical Data

Power consumption w/o inj.	Approx. 5 W at 14 V
Power consumption	Approx. 140 W at 14 V

Inputs

2 inputs for thermocouple exhaust gas temperature sensors
2 lambda interfaces LSU
4 inputs for wheel speed sensors; basic design for inductive sensors
4 inputs for turbo speed sensors; basic design for inductive sensors
1 input for inductive crankshaft sensor
1 input for Hall-effect camshaft sensor
3 system inputs 0 to 5 V
13 universal inputs 0 to 5 V, fixed pull-up
27 universal inputs 0 to 5 V, switchable pull-up
3 digital inputs

Outputs

6 injection power stages
12 power stages (low side)
2 power stages for lambda heater
2 H-bridges
2 sensor supplies 5 V/system use

3 sensor supplies 5 V/300 mA

3 sensor supplies 10 V/100 mA

Software Tools

Modas Sport Calibration Software	Inclusive
WinDarab Analysis Software	On request

Optional Functionality

Traction control SW upgrade	F 02U V00 778-01
Chassis SW upgrade	F 02U V00 779-01
Two bank hydraulic control SW upgrade	F 02U V00 949-01

Environment (not included)

Programming interface MSA-Box II	F 02U V00 327-03
Data logger C 70	F 02U V02 302-01
Display DDU 9	F 02U V02 300-02

Mating Connectors (not included)

Mating Connector I AS 6-16-35 SA	F 02U 000 467-01
Mating Connector II AS 6-16-35 SB	F 02U 000 468-01
Mating Connector III AS 6-16-35 SC	F 02U 000 469-01
Mating Connector IV AS 6-12-35 SD	F 02U 000 445-01

Piezo Specific Functions

Voltage Control

Rail pressure dependent precontrol of the voltage difference between cut off voltage and stationary actuator voltage.

Closed-loop voltage control, injector individual.

Voltage precontrol to improve dynamic behavior.

Discharging Time Control

Voltage dependent precontrol of discharging current.

Closed-loop discharging time control, injector individual.

Discharging time precontrol to improve dynamic behavior.

IVA Injector Voltage Adjustment

Determination of injector voltage demand at reference rail pressure during injector inspection in plant before IQA-measurement.

Injector assignment of voltage setpoint curves within the ECU according to injector's IVA class.

Temperature Compensation

Determination of the temperature dependent changes of voltage demand.

Definition of a temperature dependent correction factor.

Multiplicative correction of the voltage setpoint.

Installation Notes

Inspection services recommended after 110 h or 1 year, internal battery to be replaced during service.

Depending on your experiences with calibration of ECUs we recommend calibration support from Bosch Motorsport.

Please remember that the mating connectors and the programming interface MSA-Box II are not included and must be ordered separately.

Communication

3 CAN interfaces (dash, application, customer use)

2 FireWire interfaces for external communication

Ordering Information

Engine Control Unit MS 15.2

Order number **F 01T A20 023-03**

Software Options

SW Upgrade Traction Control

Order number **F 02U V00 778-01**

SW Upgrade Chassis

Order number **F 02U V00 779-01**

SW Upgrade Two Bank Hydraulic Control

Order number **F 02U V00 949-01**