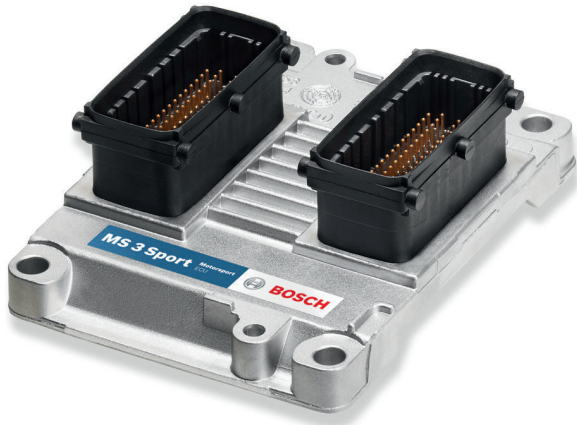


Engine Control Unit MS 3 Sport

www.bosch-motorsport.com



- ▶ Full hybrid technology
- ▶ 6 injection output stages
- ▶ 6 ignition output stages
- ▶ 34 data inputs

The MS 3 Sport is the first Bosch engine management system to be manufactured with full hybrid technology. Therefore it is very small, lightly and robust against vibrations. The MS 3 Sport is suitable for engines with up to 6 cylinders and has internal ignition output stages. Two sensor inputs are available for vibration knock detection and knock control. Various engine parameters can be measured with different input channels and transferred via CAN interface to an optional data logger or dash display.

Application

Engine layout	Max. 6 cyl., 2 bank
Control strategy	Alpha/n
Lambda control	Dual
Speed limiter	
Gear cut for sequential gear box	
Map switch corresponds to 3 different target lambda and spark maps.	
Fuel cut off	
Sequential fuel injection	
Asymmetric injection timing	

Asymmetric ignition timing	
Electronic throttle control	Optional
Knock control	Optional
Traction control	Optional
Variable valve timing (Single VVT)	Optional
Interface to Bosch Motorsport ABS M4 kit	
Support of 60-2 and 36-2 ignition trigger wheels	
Max. vibration	Vibration Profile 3 (see Appendix or www.bosch-motorsport.com)

Technical Specifications

Mechanical Data

Extremely small and flat aluminum pressure casting housing	
4 mounting points on housing	
2 connectors with high pin density	
Extremely shock and vibration proof hybrid technology	
Size	120 x 90 x 40 mm

Weight	250 g
Temperature range	-40 to 125°C
Electrical Data	
Max. power consumption	10 W at 14 V
Power supply	
Full operation	9 to 16 V
Recommended	11 to 14 V
Inputs	
2 lambda interfaces LSU	
4 inputs for Hall-effect wheel speed sensors	
1 input for inductive crankshaft sensor	
1 input for Hall-effect camshaft sensor	
22 analog inputs 0 to 5 V	
2 knock sensor inputs	
Outputs	
6 injection power stages	
6 ignition power stages (7.5 to 8.0 A)	
8 power stages (1 A/2 A; low side; PWM)	
2 power stages for lambda heater	
1 H-bridge (5 A)	
2 sensor supplies 5 V/100 mA	
Software Tools	
Modas Sport Calibration Software	Inclusive
WinDarab Analysis Software	On request
Optional Functionality	
SW Upgrade Electronic Throttle Control	F 01T A20 051-01
SW Upgrade Knock Control	F 01T A20 053-01
SW Upgrade Traction Control	F 01T A20 052-01
SW Upgrade Variable Valve Timing	F 02U V00 395-01
Environment (not included)	
Programming interface MSA-Box II	F 02U V00 327-03
Data logger C 50	F 02U V01 164-04
Display DDU 7	F 02U V01 130-04

12 steps switch for Traction Control	F 02U V01 921-01
Switch Position	Resistance [Ohm]
0	9,3
1	30,7
2	56,1
3	88,6
4	129,9
5	181,7
6	253,7
7	354,8
8	522,5
9	823,5
10	1500,7
11	4988,0

Mating Connectors (not included)

Mating Connector I	D 261 205 139-01
Mating Connector II	D 261 205 140-01

Communication

1 K-line serial interface
1 CAN interface

Ordering Information

Engine Control Unit MS 3 Sport

Please ask for more information before ordering.
Order number **F 01T A20 067-01**

Software Options

SW Upgrade E-Gas

Order number **F 01T A20 051-01**

SW Upgrade Knock Control

Order number **F 01T A20 053-01**

SW Upgrade Traction Control

Order number **F 01T A20 052-01**

SW Upgrade Variable Valve Timing

Order number **F 02U V00 395-01**

Represented by:

Europe:

Bosch Engineering GmbH
Motorsport
Robert-Bosch-Allee 1
74232 Abstatt
Germany
Tel.: +49 7062 911 9101
Fax: +49 7062 911 79104
motorsport@bosch.com
www.bosch-motorsport.de

North America:

Bosch Engineering North America
Motorsport
38000 Hills Tech Drive
Farmington Hills, MI 48331-3417
United States of America
Tel.: +1 248 876 2977
Fax: +1 248 876 7373
motorsport@bosch.com
www.bosch-motorsport.com

Latin America:

Robert Bosch Ltda
Motorsport
Av Juscelino Kubitscheck de
Oliveira 11800
Zip code 81460-900
Curitiba - Parana
Brasilia
Tel.: +55 41 3341 2057
Fax: +55 41 3341 2779

Asia-Pacific:

Bosch Engineering Japan K.K.
Motorsport
18F Queen's Tower C, 2-3-5 Minato Mirai
Nishi-ku, Yokohama-shi
Kanagawa 220-6218
Japan
Tel.: +81 45 650 5610
Fax: +81 45 650 5611
www.bosch-motorsport.jp

Australia, New Zealand and South Africa:

Robert Bosch Pty. Ltd
Motorsport
1555 Centre Road
Clayton, Victoria, 3168
Australia
Tel.: +61 (3) 9541 3901
motor.sport@au.bosch.com