



# **EasySYNC Ltd**

## **OBD-M-DB9-F-ES**

### **DB9 to OBD-II Adapter Cable**

### **Data Sheet**

**Document Reference No.: ES\_000045**

**Version 1.01**

**Issue Date: 2010-06-25**

The DB9 to OBD-II Adapter cable is a simple adapter to allow the EasySYNC range of CANbus products to mate to OBD-II interface connectors.

The DB9 to OBD-II Adapter Cable supports EasySYNC CANbus products. This cable converts EasySYNC CANbus products to the CANbus portion of a standard OBD-II interface. Additionally the CANbus signals also conform to the CAN-in-Automation (CiA) DS102-2 pin-out.

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## 1 Introduction

### 1.1 Functional Description

The DB9 to OBD-II adapter cable is a simple adapter to allow the EasySYNC range of CANbus products to mate to OBD-II interface connectors commonly used in automotive diagnostics. The DB9 end plugs directly into the EasySYNC CANPlus modules or any CANbus adapter that conforms to the CAN-in-Automation (CiA) DS102-2 pin-out. The OBD-II end plugs directly into an automotive diagnostic port. The cable functions only with the CANbus portion of the OBD-II specification.



**Figure 1-1 OBD-M-DB9-F-ES**

The Cable incorporates a standard DB9 Female connector and an OBD 16 Pin Male connector for communication between the EasySYNC CANbus products and OBD-II interface.

The EasySYNC CANbus products can be found at the link below:

<http://easysync-ltd.com/categories.php?CategoryID=123>

## 1.2 Block Diagram

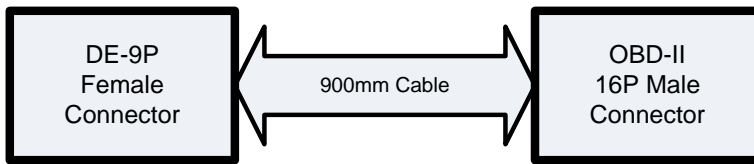


Figure 1-2 Block diagram

### 1.2.1 Block description

#### **DB9 Connector (Female)**

The DB9 connector is a female 9-way D-sub connector (a.k.a. DE-9S) that is wired to mate to the EasySYNC CANPlus products. The CANbus signals also conform to the CAN-in-Automation (CiA) DS102-2 pin-out.

#### **Cable**

The OBD-M-DB9-ES cable length is **900mm**.

#### **ODB-16P Connector (Male)**

The ODB-16P connector is wired to connect to the CANbus pins in an OBD-II automotive application.

## 2 Connections

### 2.1 Internal Connection

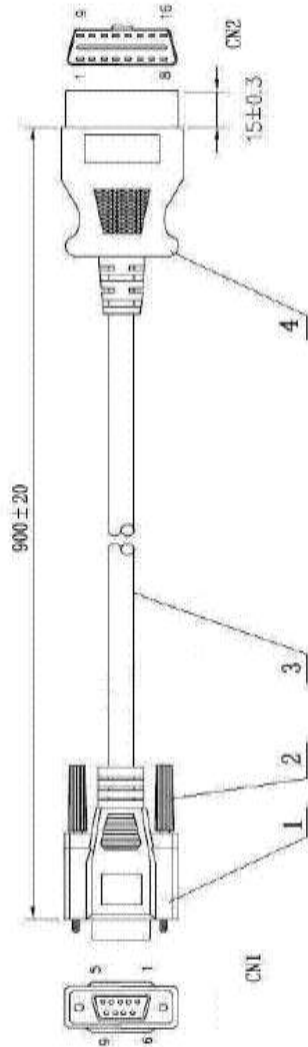
The table below describes the wiring of the OBD-M-DB9-F-ES

OBDII Pin Number	DB9 (DE-9S) Pin Number	SIGNAL NAME
4	6	Chassis Ground
5	3 & 5	Signal Ground
6	7	CAN BUS High
14	2	CAN BUS LOW
16	9	POWER
All other pins are not connected.		

**Table 2.1 – OBD-M-DB9-F-ES Internal connection.**

### 3 Mechanical Details

#### 3.1 Module Mechanical Dimensions



DB9	OBD	MT. SPEC.	PROJ.	SCALE	DATE	REV.	QTY
1	N/A				2009.4.7		1
2	14						
3	5						
4	N/A						
5	5						
6	4						
7	6						
8	N/A						
9	16						

4	CN2	OBD 16PIN MALE	1										
3	CABLE	UL2464 26AWG*9C*AL*NY-DRAIN OD-6 BLACK	2										
2	SCREW	4-40UNC L=49.5MM BLACK	2										
1	CNI	DB9 FEMALE	1										
MT. NAME		MATERIAL SPEC	QTY										
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">MT. SPEC.</td> <td style="width: 33%;">PROJ.</td> <td style="width: 33%;">SCALE</td> <td style="width: 33%;">DATE</td> <td style="width: 33%;">REV.</td> </tr> <tr> <td>STD. TOLER</td> <td>MESSG</td> <td>UNIT</td> <td>APPRD</td> <td>CONF</td> </tr> </table>				MT. SPEC.	PROJ.	SCALE	DATE	REV.	STD. TOLER	MESSG	UNIT	APPRD	CONF
MT. SPEC.	PROJ.	SCALE	DATE	REV.									
STD. TOLER	MESSG	UNIT	APPRD	CONF									
DWG. NAME		OBD CABLE											
DWG. NO.													

**Figure 3-1 Cable dimensions**

## **4 Environmental Approvals & Declarations**

### **4.1 Safety**

The OBD-M-DB9-F-ES is defined as Limited Power Supply (LPS) device, with operating voltages under 60VDC.

### **4.2 Environmental**

The OBD-M-DB9-F-ES is a lead-free device that complies with the following environmental directives: RoHS, WEEE, REACH, PFOS and DecaBDE.

## 5 Troubleshooting

### 5.1 Technical Support

Technical support may be obtained from your nearest EasySYNC office or by email:

United Kingdom: [support@easysync.co.uk](mailto:support@easysync.co.uk)

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## Appendix B - Revision History

Rev 1.0	First release	2010-05-20
Rev 1.01	Updated Figure 1.2	2010-06-25

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