



**EasySYNC Ltd**

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

**DB9 to OBD-II Adapter Cable**

**Data Sheet**

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

**Version 1.0**

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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.

**Unit 1, 2 Seaward Place, Centurion Business Park, Glasgow, G41 1HH, United Kingdom**

**Tel.: +44 (0) 141 418 0181 Fax: + 44 (0) 141 418 0110**

**E-Mail (Support): [support@easysync.co.uk](mailto:support@easysync.co.uk) Web: <http://easysync-ltd.com/>**

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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

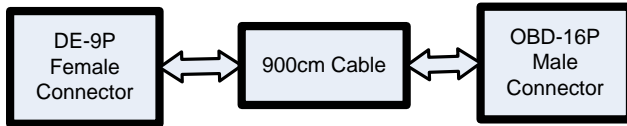


Figure 1-2 Block diagram

### 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

<b>OBDII Pin Number</b>	<b>DB9 (DE-9S) Pin Number</b>	<b>SIGNAL NAME</b>
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

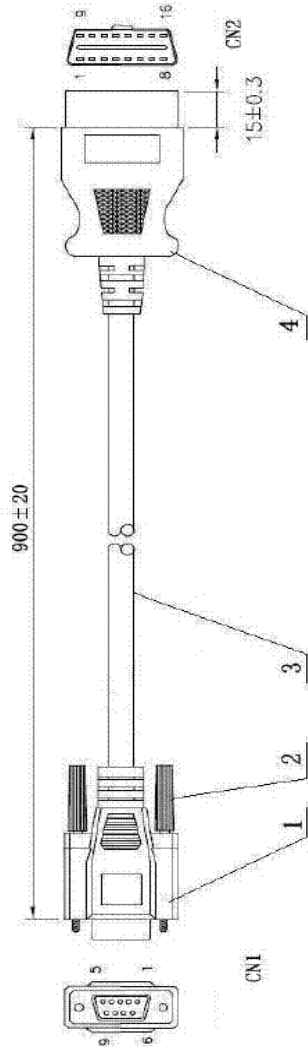


Figure 3-1 Cable dimensions

DB9	1	2	3	4	5	6	7	8	9
OBD	N/A	14	5	N/A	5	4	6	N/A	16

4	CN2	1	1						
3	CABLE	UI2464 26AWG*9C*AL/MT+DRAIN OD=6 BLACK	2	SCREW	4-40UNC L=49.5MM BLACK	1	CN1	DB9 FEMALE	1
2	NO.	NAME	MATERIAL SPEC	QTY					
1	MT. SPEC.	PROJ.	SCALE	DATE	2009.4.7				
	STU. TOLER	DESIGN	UNIT	CHKD	Phillip				
				APVD					
				CONF					
				DWG NAME	OBD CABLE				
				DWG NO.					

## **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)

United States: [support@easysync-ltd.com](mailto:support@easysync-ltd.com)



## 6 Contact Information

### Head Office – Glasgow, UK

EasySYNC Limited  
Unit 1, 2 Seaward Place,  
Centurion Business Park  
Glasgow, G41 1HH  
United Kingdom  
Tel: +44 (0) 141 418 0181  
Fax: +44 (0) 141 418 0110

E-mail (Sales)	<a href="mailto:sales@easysync.co.uk">sales@easysync.co.uk</a>
E-mail (Support)	<a href="mailto:support@easysync.co.uk">support@easysync.co.uk</a>
E-mail (General Enquiries)	<a href="mailto:admin@easysync.co.uk">admin@easysync.co.uk</a>
Web Site URL	<a href="http://easysync-ltd.com/">http://easysync-ltd.com/</a>
Web Shop URL	<a href="http://easysync-ltd.com/">http://easysync-ltd.com/</a>

### Branch Office – Hillsboro, Oregon, USA

EasySYNC Limited (USA)  
7235 NW Evergreen Parkway, Suite 600  
Hillsboro, OR 97123-5803  
USA  
Tel: +1 (503) 547 0909  
Fax: +1 (503) 547 0990

E-Mail (Sales)	<a href="mailto:sales@easysync-ltd.com">sales@easysync-ltd.com</a>
E-Mail (Support)	<a href="mailto:support@easysync-ltd.com">support@easysync-ltd.com</a>
E-Mail (General Inquiries)	<a href="mailto:admin@easysync-ltd.com">admin@easysync-ltd.com</a>
Web Site URL	<a href="http://easysync-ltd.com/">http://easysync-ltd.com</a>
Web Shop URL	<a href="http://easysync-ltd.com/">http://easysync-ltd.com</a>

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## Appendix B - Revision History

Rev 1.0	First release	20/05/2010
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