



# **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.

**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/>**

Neither the whole nor any part of the information contained in, or the product described in this manual, may be adapted or reproduced in any material or electronic form without the prior written consent of the copyright holder. This product and its documentation are supplied on an as-is basis and no warranty as to their suitability for any particular purpose is either made or implied. EasySYNC Ltd will not accept any claim for damages howsoever arising as a result of use or failure of this product. Your statutory rights are not affected. This product or any variant of it is not intended for use in any medical appliance, device or system in which the failure of the product might reasonably be expected to result in personal injury. This document provides preliminary information that may be subject to change without notice. No freedom to use patents or other intellectual property rights is implied by the publication of this document. EasySYNC Ltd, Unit 1, 2 Seaward Place, Centurion Business Park, Glasgow, G41 1HH, United Kingdom. Scotland Registered Number: SC224924

**Copyright © 2010 EasySYNC Limited**

---

<b>1</b>	<b>Introduction .....</b>	<b>3</b>
<b>1.1</b>	<b>Functional Description .....</b>	<b>3</b>
<b>1.2</b>	<b>Block Diagram .....</b>	<b>4</b>
1.2.1	Block description .....	4
<b>2</b>	<b>Connections.....</b>	<b>5</b>
<b>2.1</b>	<b>Internal Connection .....</b>	<b>5</b>
<b>3</b>	<b>Mechanical Details.....</b>	<b>6</b>
<b>3.1</b>	<b>Module Mechanical Dimensions.....</b>	<b>6</b>
<b>4</b>	<b>Environmental Approvals &amp; Declarations.....</b>	<b>7</b>
<b>4.1</b>	<b>Safety .....</b>	<b>7</b>
<b>4.2</b>	<b>Environmental.....</b>	<b>7</b>
<b>5</b>	<b>Troubleshooting .....</b>	<b>8</b>
<b>5.1</b>	<b>Technical Support .....</b>	<b>8</b>
<b>6</b>	<b>Contact Information .....</b>	<b>9</b>
	<b>Appendix A - List of Figures and Tables .....</b>	<b>10</b>
	<b>Appendix B - Revision History .....</b>	<b>11</b>

## 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

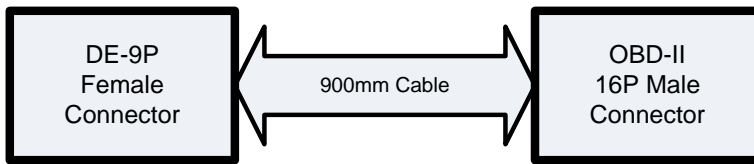


Figure 1-2 Block diagram

### 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

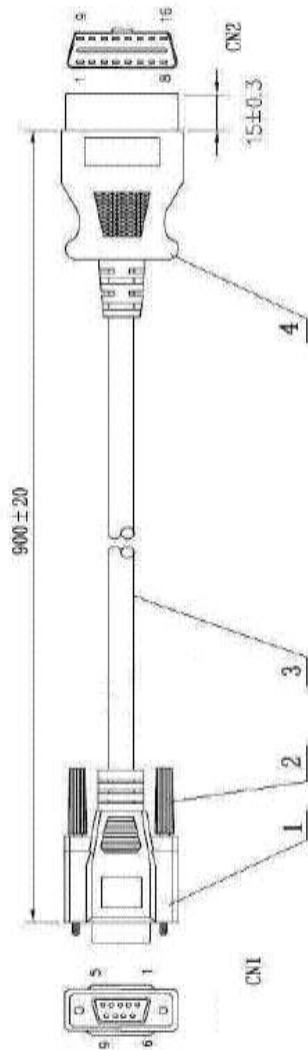


Figure 3-1 Cable dimensions

DB9		OBD	
1	N/A	4	CN2
2	14	3	CABLE
3	5	2	SCREW
4	N/A	1	CN1
5	5		MTL. SPEC.
6	4		PROJ.
7	6		SCALE
8	N/A		DATE
9	16		CHKD
			APPRD
			CONF
			UNIT
			DWG. NO.


OBD CABLE

## **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>

## Appendix A - List of Figures and Tables

### List of Figures

Figure 1-1 OBD-M-DB9-F-ES .....	3
Figure 1-2 Block diagram .....	4
Figure 3-1 Cable dimensions .....	6

### List of Tables

Table 2.1 – OBD-M-DB9-F-ES Internal connection.....	5
---	---

## Appendix B - Revision History

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