



**easYgen-2200 Package P2**

**‘Connecting an APECS 4500 W/CAN via CAN bus’**

Optional Supplementary Information

## General Information

The following alert boxes can be used in this publication:



“DANGER” indicates a hazardous situation which, if not avoided, will result in death or serious injury.



“WARNING” indicates a hazardous situation which, if not avoided, could result in death or serious injury.



“CAUTION”, used with the safety alert symbol, indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

**NOTICE**

“NOTICE” is used to address practices not related to personal injury.

**IMPORTANT**

“IMPORTANT” is used to address practices not related to personal injury.

## Personnel



**WARNING!**  
Hazards due to insufficiently qualified personnel!

If unqualified personnel perform work on or with the control unit hazards may arise which can cause serious injury and substantial damage to property.

- Therefore, all work must only be carried out by appropriately qualified personnel.

For further Product Support Options, Product Service Options, Returning Equipment for Repair, and/or Engineering Services please download application note #37573.

## Requirements

The following parts are mandatory to follow the instructions of this document:

Device	Part Number
easYgen-2200 Package P2	8440-1857, 8440-1858
APECS 4500 W/CAN	8800-1006
APECS 5000 Calibration Kit	SA-4488
Connector Kit	SA-4490
PC or laptop with an appropriate version of ToolKit running and connected to the easYgen	
ATC configuration tool for the APECS controller. It can be downloaded at <a href="http://www.woodward.com">www.woodward.com</a> .	



Read this entire application note and all other publications pertaining to the work to be performed before installing, operating, or servicing this equipment. Practice all plant and safety instructions and precautions.

**Failure to follow instructions can cause personal injury and/or property damage!**

**Any unauthorized modifications to or use of this equipment outside its specified mechanical, electrical, or other operating limits may cause personal injury and/or property damage, including damage to the equipment.**

Any such unauthorized modifications: constitute "misuse" and/or "negligence" within the meaning of the product warranty thereby excluding warranty coverage for any resulting damage, and invalidate product certifications or listings.



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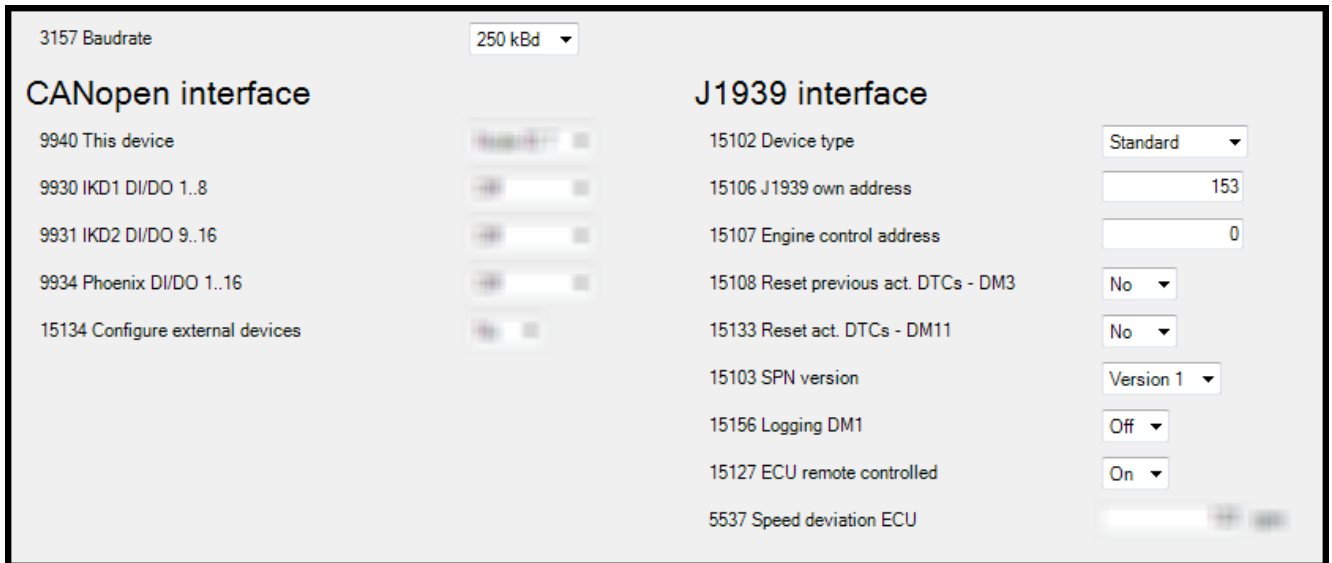
## Introduction

The easYgen-2200 Package P2 has one analog output but a J1939 interface. It is a very easy and cost effective solution to add an APECS 4500 W/CAN to the system for controlling the frequency.

Please follow the steps described below:

### 1. Setup of the easYgen controller via ToolKit

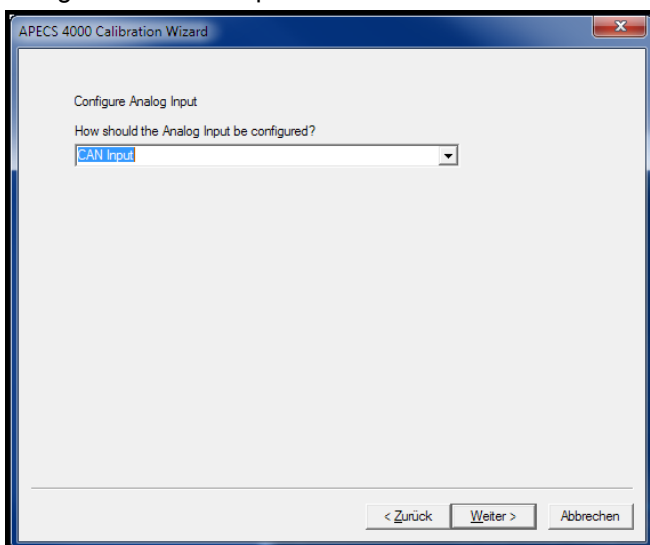
In the “CAN interface 2 config.” menu adjust the settings to the values shown in the screenshot. The speed deviation setting depends on the engine.



CANopen interface		J1939 interface	
3157 Baudrate	250 kBd	15102 Device type	Standard
9940 This device		15106 J1939 own address	153
9930 IKD1 DI/DO 1..8		15107 Engine control address	0
9931 IKD2 DI/DO 9..16		15108 Reset previous act. DTCs - DM3	No
9934 Phoenix DI/DO 1..16		15133 Reset act. DTCs - DM11	No
15134 Configure external devices		15103 SPN version	Version 1
		15156 Logging DM1	Off
		15127 ECU remote controlled	On
		5537 Speed deviation ECU	

### 2. Setup of the APECS controller

Follow the setup wizard in the ATC tool for entering all engine related values. The analog input needs to be configured to “CAN input”



APECS 4000 Calibration Wizard

Configure Analog Input

How should the Analog Input be configured?

CAN Input

< Zurück Weiter > Abbrechen

### 3. Setup wiring between easYgen and APECS



#### Dangerous Voltage!

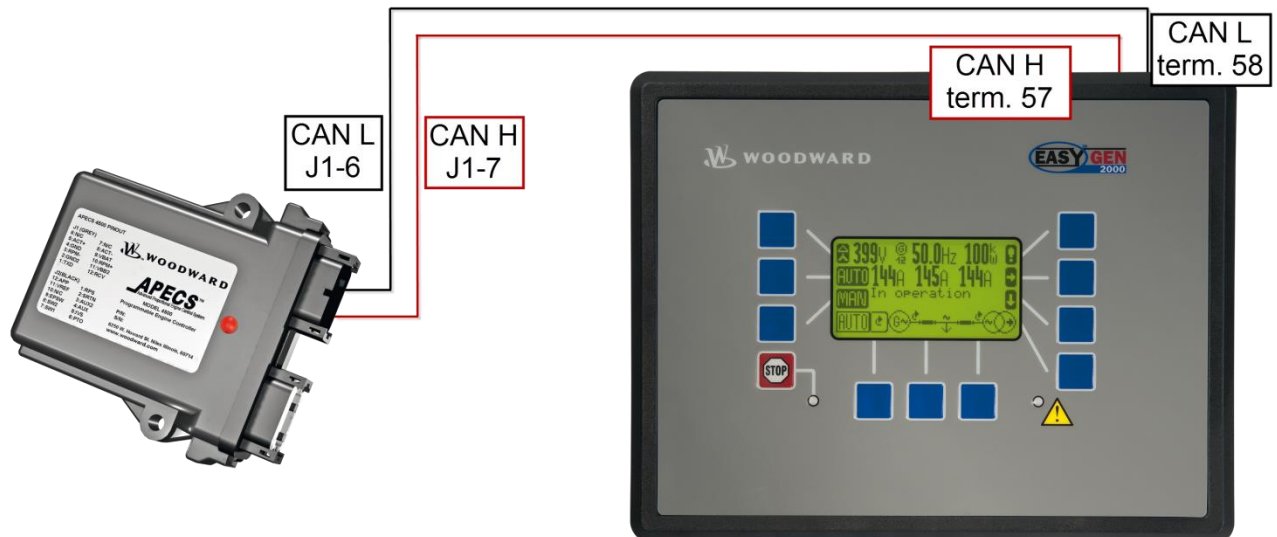
Some other terminal connections carry voltage with danger to life.

Take care for appropriate safety precautions.

The CAN bus between the units must be wired as follows:

	APECS	easYgen
<b>Terminal</b>		
CAN-H	J1-7	57
CAN-L	J1-6	58

A termination resistor (120 ohm) must be placed between CAN-H and CAN-L at both ends of the CAN line.



### 4. Displayed values in easYgen

In the *J1939 analog values 1* the easYgen now displays the engine speed (SPN 190) and the throttle position (SPN 91). The throttle position only shows a percentage value when a potentiometer is wired to the APECS controller (J2-2; J2-11; J2-12):



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