37445

Option K25
Mains Real Power Measurement
Via Analog Input 3

Brief Manual
easYgen-3200

Manual 37445

WARNING

Read this entire manual 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.

The engine, turbine, or other type of prime mover should be equipped with an overspeed (overtemperature, or overpressure, where applicable) shutdown device(s), that operates totally independently of the prime mover control device(s) to protect against runaway or damage to the engine, turbine, or other type of prime mover with possible personal injury or loss of life should the mechanical-hydraulic governor(s) or electric control(s), the actuator(s), fuel control(s), the driving mechanism(s), the linkage(s), or the controlled device(s) fail.

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: (i) constitute "misuse" and/or "negligence" within the meaning of the product warranty thereby excluding warranty coverage for any resulting damage, and (ii) invalidate product certifications or listings.

CAUTION

To prevent damage to a control system that uses an alternator or battery-charging device, make sure the charging device is turned off before disconnecting the battery from the system.

Electronic controls contain static-sensitive parts. Observe the following precautions to prevent damage to these parts.

- **Discharge body static before handling the control (with power to the control turned off, contact a grounded surface and maintain contact while handling the control).**
- **Avoid all plastic, vinyl, and Styrofoam (except antistatic versions) around printed circuit boards.**
- **Do not touch the components or conductors on a printed circuit board with your hands or with conductive devices.**

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Important definitions

WARNING

Indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury.

CAUTION

Indicates a potentially hazardous situation that, if not avoided, could result in damage to equipment.

NOTE

Provides other helpful information that does not fall under the warning or caution categories.

Revision History

Rev.	Date	Editor	Changes
NEW	08-10-27	TE	Release

Content

Chapter 1.
Introduction

ATTENTION

This brief manual must be used together with the standard manuals.

The following standard manuals are required to install, commission, and operate the easYgen with **Option K25**:

- **easYgen-3000** Installation Manual 37223
- **easYgen-3000** Configuration Manual 37224
- **easYgen-3000** Operation Manual 37225
- **easYgen-3000** Interface Manual 37383

This manual includes the following option(s):

- **Option K25**
  - Provides the mains real power measurement over the analog input 3 (terminals 13 and 14).
  - All other functions are the same like in the originally easYgen-3200.
  - Option K25 is only possible with P/N 8440-1876

Chapter 2.
Additional Functionality

Mains Real Power Measurement

Overview

The easYgen with **Option K25** provides the mains real power measurement over the analog input 3 (terminals 13 and 14).

Description

Please notice in comparison to the easYgen-3200 (8440-1831) that the mains measurement is exclusively done by the analog input 3. The mains current related values are masked out on display (current, reactive power and power factor). The reactive power internally is zero and the power factor is accepted as “1.00”. The monitoring of mains power and power factor is not usable. In case the monitoring is needed the flexible limits can be used. The monitored data source must be analog input 3.

To be more flexible for the power measurement range the unit offers a configuration (ID7500). It is to consider that the resolution of the analog input is 10 bit. The parameter shall help to adjust the adequate resolution for power control and displayed value.

It is recommended to use the filter constant “3” for the analog input in this case.

With this option it is possible to control the mains incoming import or export power. The measured value from the analog input will be also displayed in the start screen as the mains power.

The dedicated CT connection (terminals 1 and 2) can only be used for ground current measurement. The option K25 is an interim solution. The next generation of EG3200 will offer both: Measurement mains power by dedicated CT or by each analog input. The mains power monitoring will be usable again.

The operating manual of this part number is not changed to the original one. This shall explain in more detail how the unit handles the incoming signal of the power transducer.

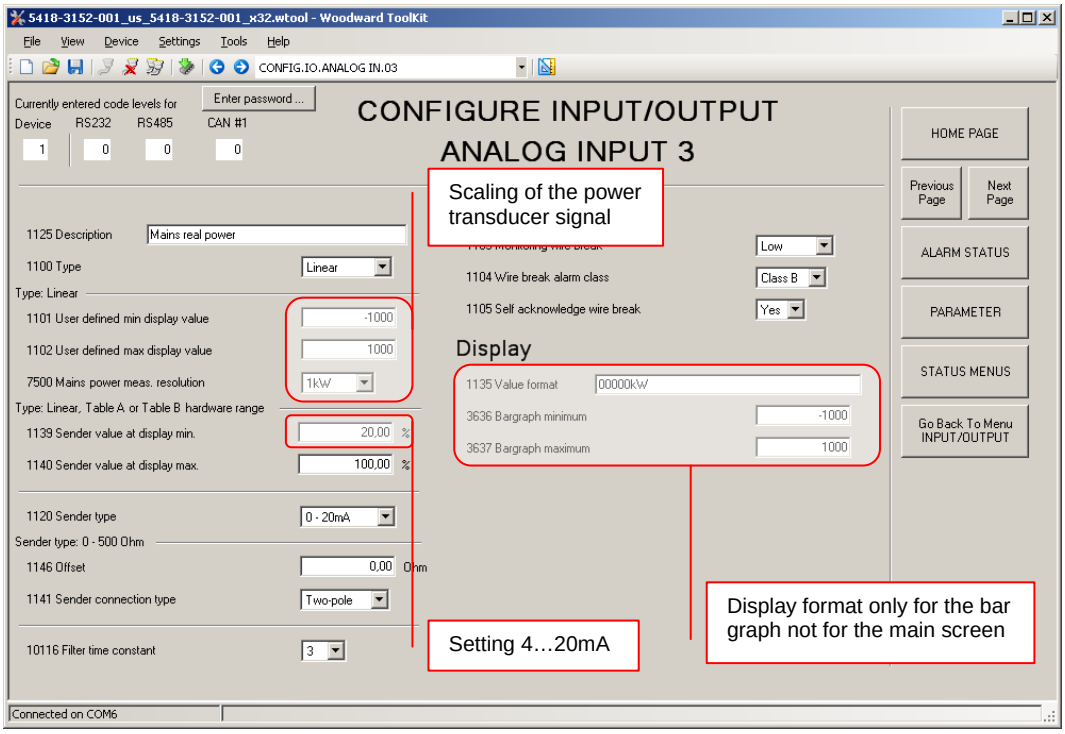
Configuration Example

The following example shall show how the unit is to configure regarding the mains power measurement. In this example it is assumed that a power transducer sends a 4…20mA signal, like:

4mA = -1000kW
20mA = +1000kW

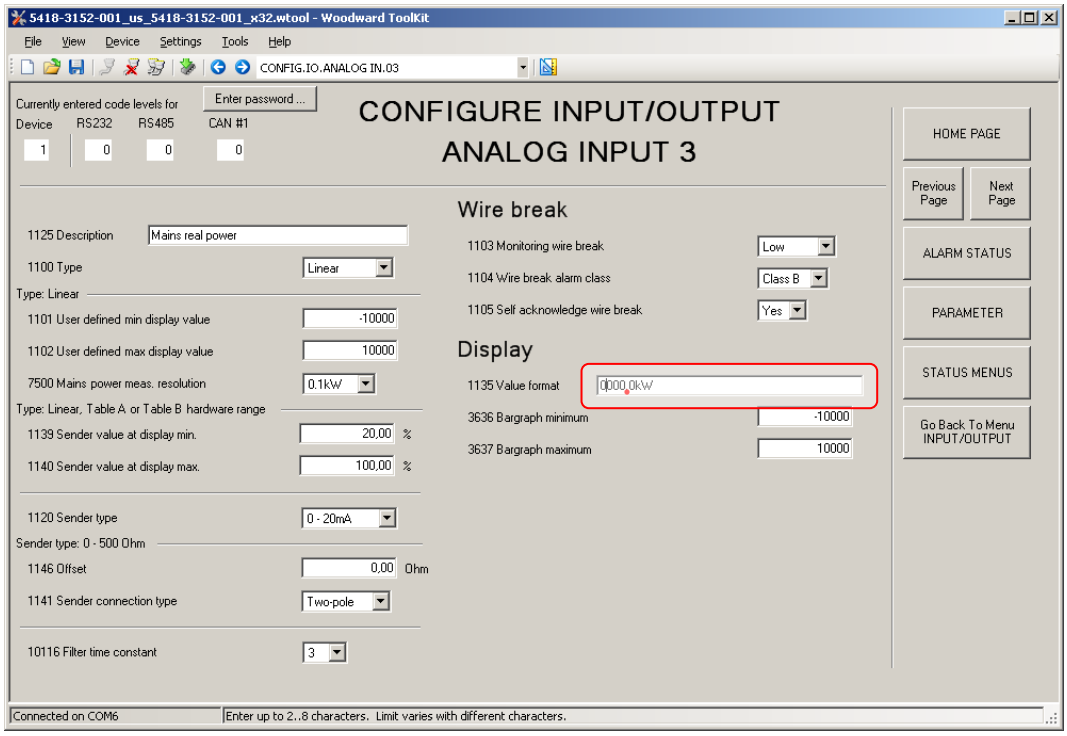
Example with resolution 1 kW

With the resolution of 10 bit it is recommended to choose here a resolution of “1kW”. The settings would be as follow:



Example with resolution 0.1 kW

This setting with the upper transducer values is actually not recommended, but sometimes it could be required.



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