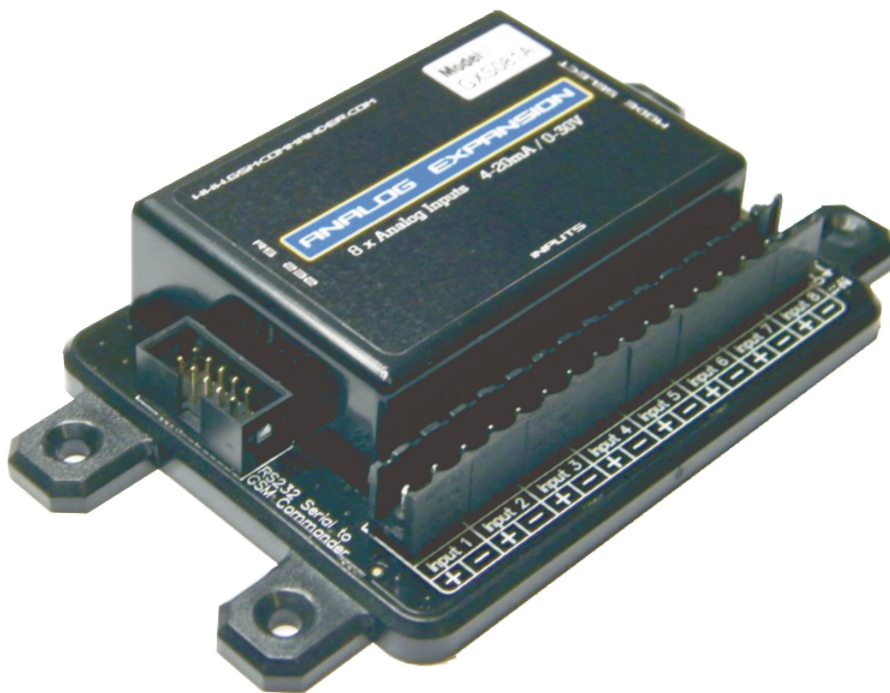




Analog Expansion Manual

V1.00



Polygon Technologies

Before attempting to connect or operate this product, please read these instructions in its entirety, especially the guarantee conditions.

This manual is intended to provide detailed technical specifications and explanations, to the basic user as well as the more technically-minded person. This manual is a live document, and will be updated often with new information. Please insure that you have the latest version, by checking our website at: <http://www.gsmcommander.com>.

Changelog:

SD 11 June 2013 - Updated format.

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1. INTRODUCTION

The standard GSM Commander supports only a single 0-10v analog input. In many applications, this is not enough. The Analog Expansion solves this issue by adding an additional 8 analog inputs. The Analog Expansion can be used in any application where a number of analog inputs are required. This includes refrigeration, process control and other interesting applications.

2. HOW DOES IT WORK?

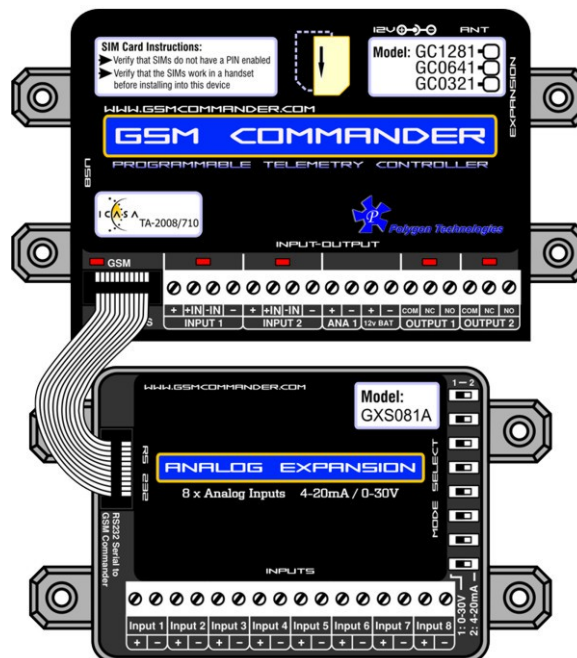
The input circuits of the Analog Expansion consists of 120ohm series resistors internal to the expander. The voltage across these resistors are sampled by the Analog Expansion. The Analog Expansion converts the analog input values into serial commands that are sent to the serially-attached GSM Commander. In the GSM Commander, variables are normally used to keep count of events. In this case, we use them to store analog values.

If an analog input is selected to be a 4-20mA input, the resulting values are calibrated such that an input current of 10mA will result in a variable reading of 1000<must be 10000>. Likewise, an input current of 5mA or 20mA will result in a variable reading of 5000 and 20000 respectively.

If an analog input is selected to be a 0-30V voltage input, the resulting readings are calibrated such that an input voltage of 12V will result in a variable reading of 12000, and an input voltage of 22V will result in a reading of 22000.

Input 1 will be populated into variable A, and Input 2 into variable B etc. The Analog Expansion obviously requires a GSM Commander with the variables feature included, and thus the Analog Expansion only works on GC0641 and GC1281 variants. (GC0321 is excluded).

3. INSTALLATION



The Analog Expansion is connected to the serial RS232 port of the GSM Commander via a ribbon cable(provided with kit) as indicated in the picture above.

The 8 analog inputs allow you to either connect a 4-20mA or 0-30V analog device. Each analog input is two-way configurable by means of the 8 slide switches located on the side of the Analog Expansion.

4. TECHNICAL SPECIFICATIONS

Dimensions	125,7mm x 71,9mm x 26mm
Power Supply	Powered from GSM Commander
Mounting	Unit is housed in a very durable ABS casing which has 4 protruding tabs, which allows it to be mounted firmly to any surface by means of 4 screws.
Current consumption	~ 60mA

5. GUARANTEE

The Analog Expansion is guaranteed for a period of 24 months against defects in materials or workmanship. Should your product become defective during the guarantee period it will be repaired or replaced at the sole discretion of **Polygon Technologies CC** under the following conditions:

A: No components must not have been tampered with or removed.

B: The guarantee does not cover damage resulting from excessive input voltages, lightning, power surges or water ingress.

A decision about issues A and B will be at the sole discretion of **Polygon Technologies CC**. This guarantee does not provide for shipping costs. This will be for the account of the user under all circumstances.

6. IMPORTANT NOTICE (DISCLAIMER / COPYRIGHT)

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Polygon Technologies CC, its directors, members, employees and agents.

Much effort has been made to ensure the contents of this manual are complete and without errors. Nonetheless, the Company cannot be held liable for any damages directly or indirectly resulting from any errors in this manual.

The Company will under no circumstances be held liable for any injuries/death or damages that result from the use of this product, irrespective of whether such injuries/death or damages resulted from a faulty product or negligence of any kind on the part of the Company.

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Polygon Technologies CC reserves the right to make changes to contents of this manual, without notice, at any time.

7. MANUFACTURER CONTACT DETAILS

Polygon Technologies CC may be contacted at:

Email: Info@gsmcommander.com

Web: www.gsmcommander.com

Telephone: +27(0)21 9817062

Fax: +27(0)86 6823310

Postal Address: PO Box 1655

Brackenfell

7561

South Africa