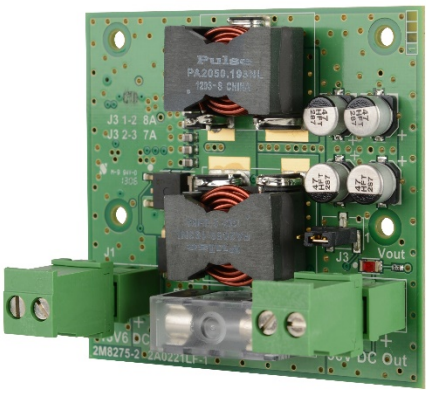
Gallagher

Z40 Voltage Booster

Installation Note

Gallagher Z40 Voltage Booster: G13310



ATTENTION: This equipment contains components that can be damaged by electrostatic discharge. Ensure both you and the equipment are earthed before beginning any servicing.

Disclaimer

This document gives certain information about products and/or services provided by Gallagher Group Limited or its related companies (referred to as "Gallagher Group").

The information is indicative only and is subject to change without notice meaning it may be out of date at any given time. Although every commercially reasonable effort has been taken to ensure the quality and accuracy of the information, Gallagher Group makes no representation as to its accuracy or completeness and it should not be relied on as such. To the extent permitted by law, all express or implied, or other representations or warranties in relation to the information are expressly excluded.

Neither Gallagher Group nor any of its directors, employees or other representatives shall be responsible for any loss that you may incur, either directly or indirectly, arising from any use or decisions based on the information provided.

Except where stated otherwise, the information is subject to copyright owned by Gallagher Group and you may not sell it without permission. Gallagher Group is the owner of all trademarks reproduced in this information. All trademarks which are not the property of Gallagher Group, are acknowledged.

Copyright © Gallagher Group Ltd 2021. All rights reserved.

1 Introduction

The Gallagher Z40 Voltage Booster is a DC to DC step-up converter.

The Voltage Booster converts an input voltage of 13.6 Vdc (+ 15%) to an output voltage of 36 Vdc (+ 10%). This increased output voltage can be used to supply power to other devices on a long cable run.

2 Shipment Contents

Check the shipment contains the following items:

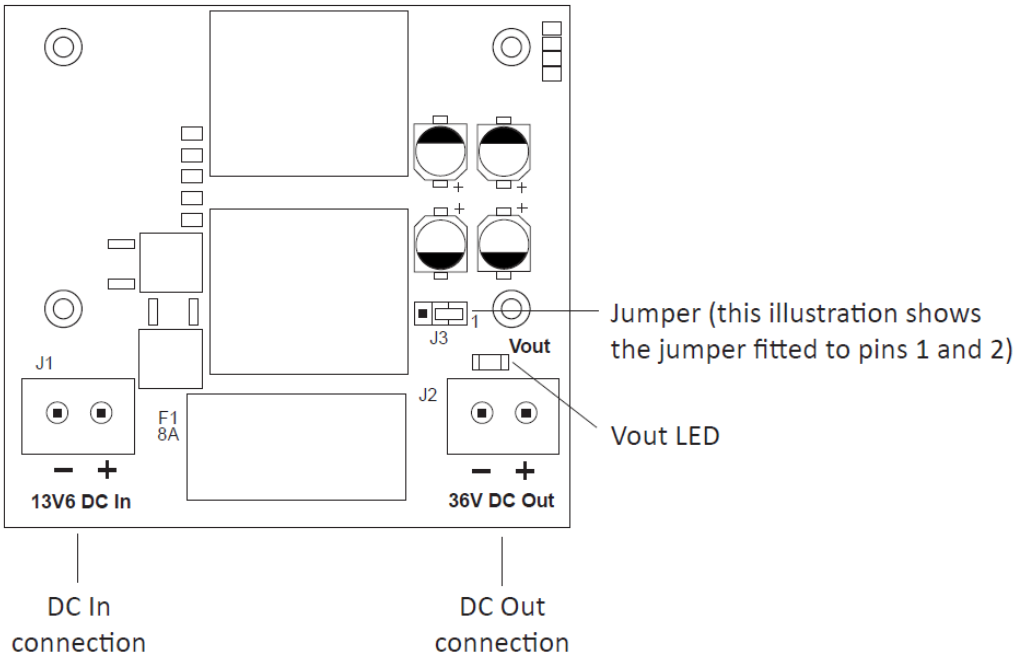
- 1 x Gallagher Z40 Voltage Booster
- 4 x 4G X 1.25" mounting screws

3 Power Supply

The Gallagher Z40 Voltage Booster requires an input voltage of 13.6 Vdc (+ 15%).
Note: It is recommended that the Voltage Booster is powered by the Gallagher Power Supply (C200440).

4 Component Layout

The following diagram illustrates the Voltage Booster component layout.



5 Vout LED

The Vout LED is located on the PCB board above the DC Out connection. When the Vout LED is on (Red), an output voltage greater than 34 Vdc is present.

Copyright © Gallagher Group Limited

6 Temperature

The Voltage Booster ambient temperature operating range without loss of performance is -10 to +70 0C (+14 to +158 0F).

The temperature of the Voltage Booster will increase as the number of devices powered by the Voltage Booster is increased. The Voltage Booster components can become very hot under high load conditions, this is normal, and caution should be taken when servicing.

Note: Consideration should be taken with regards to the temperature generated by surrounding devices when installing the Voltage Booster.

7 Installation

7.1 Equipment you will need

Installation tools required are:

- Phillips (cross head) screwdriver
- Terminal (flat) screwdriver
- Wire stripper

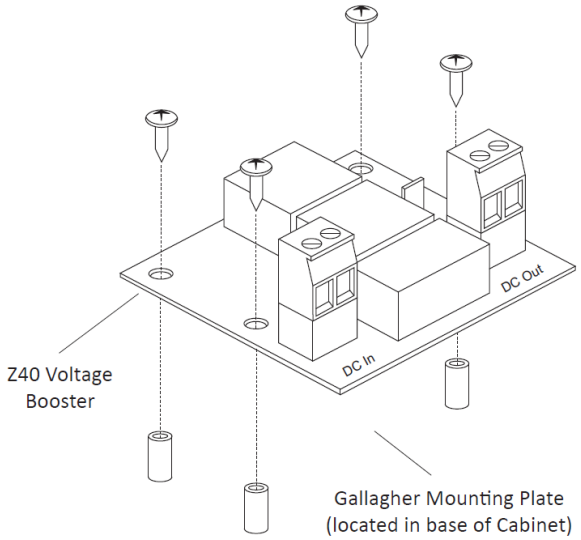
Additional components that may be required to complete the installation are:

- Power supply cable. Recommended diameter 18 AWG (0.8 mm^2)
- Power out cable. Recommended Gallagher CAT 5e 4 twisted pair 24 AWG (0.2 mm^2) network cable (G10600)

7.2 Procedure

The Gallagher Z40 Voltage Booster mounts into a Gallagher Cabinet onto a Gallagher Mounting Plate (C200001), a Gallagher Controller Sub-Plate (C200002), or a Gallagher 6000 I/O Mounting Plate (C200003).

1. Mount the Voltage Booster.
   Using the four screws provided, mount the Voltage Booster onto the Gallagher Mounting Plate (located in the base of the Gallagher Cabinet).



Copyright © Gallagher Group Limited

2. Connect the power supply cable to the DC In connection.
3. Connect the power out cable to the DC Out connection.
4. For low to medium loads, (e.g. less than 70 Gallagher Z10 Tension Sensors) set the jumper to pins 2 and 3 to reduce the peak output current and the input current required from the power supply.

8 Fault Finding

The purpose of this section is to provide the field technician with a means of locating a fault with the Voltage Booster.

8.1 General checks

- Is the Vout LED light on?
  If not, then check to ensure the Voltage Booster is receiving an input voltage of 13.6 Vdc (± 15%).
- Has all screw terminal wiring been connected correctly?
- Are all connectors pressed firmly into their sockets?
- Are there any obvious signs of component damage on the PCB board?

8.2 General fault finding

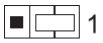
- Measure the output voltage to ensure the Vout LED is not faulty.
- Check the on-board 8 A fuse. To replace the fuse, disconnect the power supply. Remove the fuse cover and replace the fuse with a 125 V AC or 230 V AC, 8 A, 5 mm diameter, 20 mm long fast acting fuse (Gallagher Product Code: 2M1789).
- Disconnect all devices from the Voltage Booster output and then add each device, one at a time, until the fault occurs. The last device added is likely to be the problem.

Copyright © Gallagher Group Limited

9 Technical specifications

Routine maintenance:	Not applicable for this device
Input voltage:	13.6 Vdc (± 15%)
Output voltage:	36 Vdc (± 10%)
Maximum average output current:	2 A
Operating temperature range:	-10 °C to +70 °C (+14 °F to +158 °F)
Humidity:	95% non-condensing
Fuse rating:	8 A
Shipment weight:	0.2 kg (0.4 lb) includes packaging
Dimensions Length: Width: Height:	 61 mm (2.4 inches) 66 mm (2.6 inches) 30 mm (1.2 inches) with connectors

Current:

Jumper position	**Output current limit**	**Input current required from 13.6 Vdc ± 15%**
Pins 1, 2 	2.5 A	8 A *
Pins 2, 3 	2 A	7 A *

* This is the peak current drawn when using a short circuit on the output of the voltage booster. The actual current drawn can be calculated using the Z10 Fence Designer. The Z10 Fence Designer can be located here:
http://security-support.gallagher.com

Notes:

- The default jumper position is set to pins 1 and 2.
- At startup (when the jumper is in the default position) a peak output current of 2.5 A is allowed.
- For low to medium loads, the jumper can be set to pins 2 and 3 to reduce the peak output current and the input current required from the power supply.

Copyright © Gallagher Group Limited

10 Approvals and Compliance Standards



This symbol on the product or its packaging indicates that this product must not be disposed of with other waste. Instead, it is your responsibility to dispose of your waste equipment by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local city recycling office or the dealer from whom you purchased the product.

RoHS COMPLIANT

This product complies with the environmental regulations for the Restriction of Hazardous Substances in electrical and electronic equipment (RoHS). The RoHS directive prohibits the use of electronic equipment containing certain hazardous substances in the European Union.

FCC

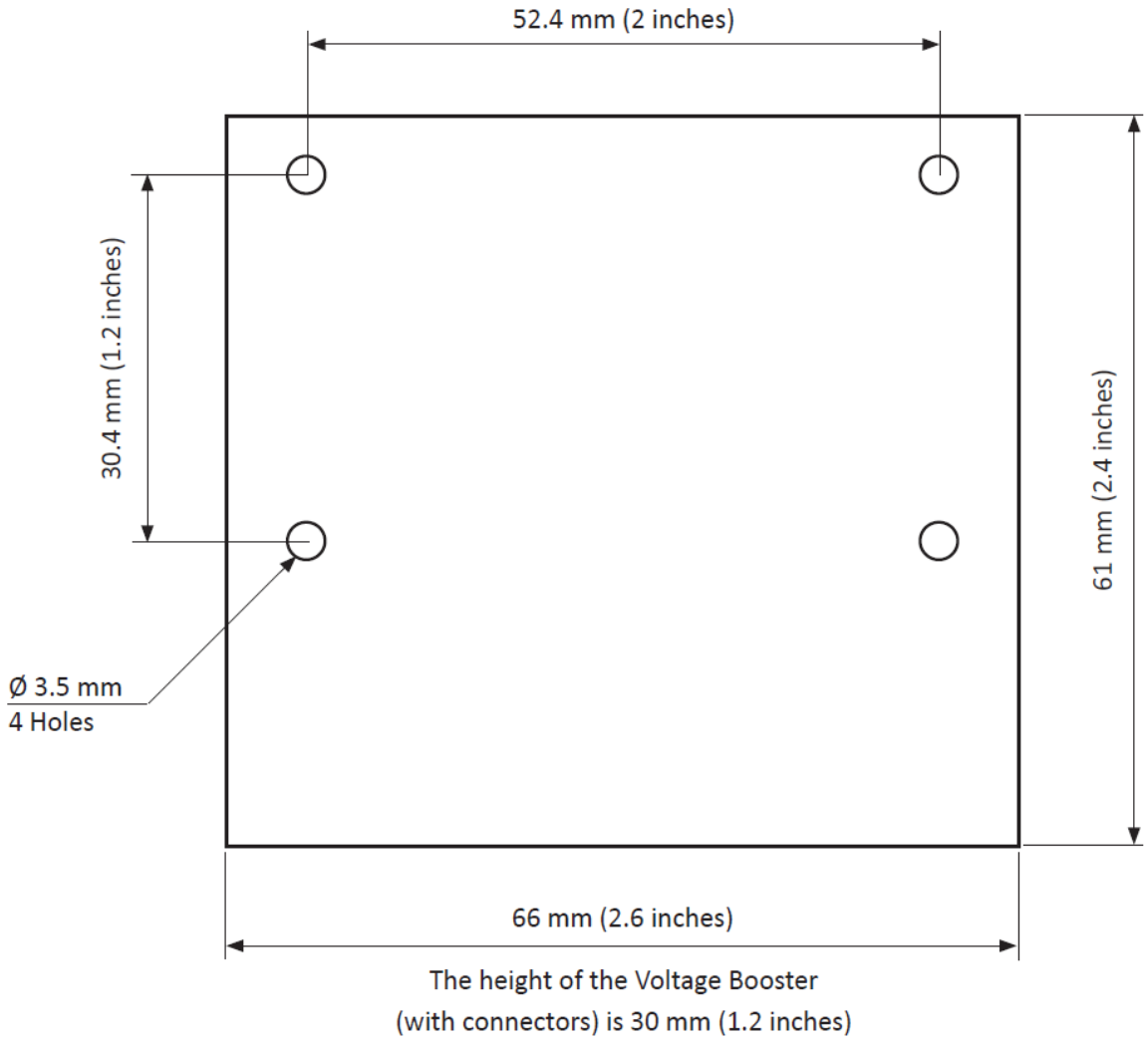
This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

UK CA CE

Copyright © Gallagher Group Limited

11 Unit Dimensions



IMPORTANT

This picture is not to scale, therefore use the measurements provided.

Copyright © Gallagher Group Limited