



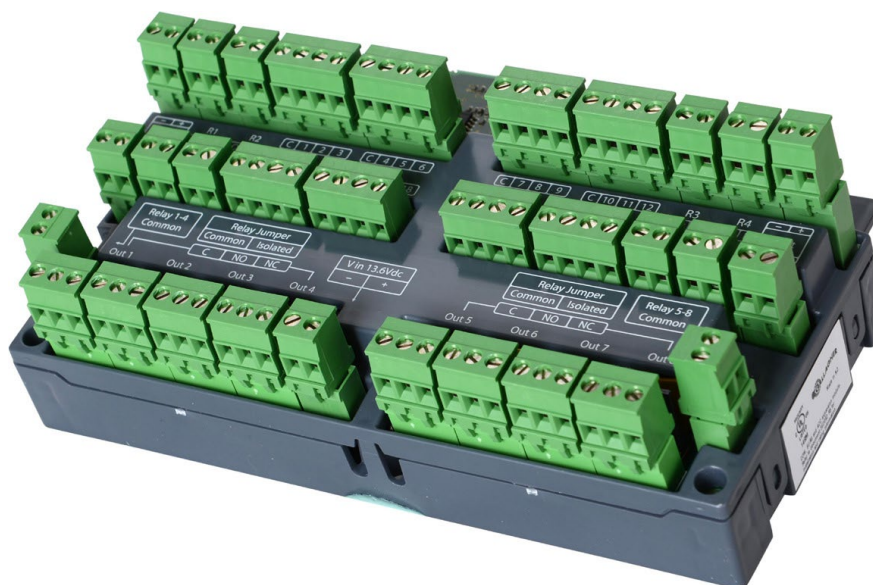
Reader Module

(for the Gallagher Controller 6000)

Installation Note

4R Module: C300141

8R Module: C300181



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Contents

1	Introduction	4
2	Before you begin	4
2.1	Shipment contents.....	4
2.2	Power Supply	4
2.3	Cabling	5
3	Installation	5
4	Removing the Reader Module	6
5	Component Layouts	7
5.1	8R Module	7
5.2	4R Module	7
6	Readers	8
7	Relay Jumpers	8
8	Wiring Diagram	9
9	Comms LED Diagnostic Indications	10
10	Technical Specifications	10
11	Approvals and Compliance Standards	11
12	Mounting Dimensions.....	12

1 Introduction

The Gallagher Reader Module is available in two variants, the 8R Module and the 4R Module. Both variants allow the connection of readers, inputs and outputs.

The Reader Module connects to a Gallagher Controller 6000 only. When connected both the Controller 6000 and the reader module will fit into a standard Gallagher Cabinet.

The differences between the two variants are shown in the following table:

Reader Module Variant	Features
8R Module	• Supports the following combinations of readers: • 8 x Cardax IV readers, or • 4 x Wiegand readers, or • any combination, where 1 Wiegand reader takes the place of 2 Cardax IV readers, • 24 inputs, • 8 outputs, • a jumper with fuse for each relay, and • a power supply common for each group of 4 outputs.
4R Module	• Supports the following combinations of readers: • 4 x Cardax IV readers, or • 2 x Wiegand readers, or • 2 x Cardax IV readers and 1 x Wiegand reader, • 12 inputs, • 4 outputs, • a jumper with fuse for each relay, and • a power supply common for all 4 outputs.

Notes:

- There are three variants of the Controller 6000, (i.e. Standard High Spec and High Spec PIV). Both Reader Module variants can be used with either the Standard or High Spec variants.
- The Controller 6000 can operate without a Reader Module connected.

2 Before you begin

2.1 Shipment contents

Check the shipment contains the following items:

- 1 x Gallagher Reader Module
- 1 x Gallagher Reader Module product label
- 1 x Gallagher Reader module identification decal
- 2 x 16 mm M3 screws
- 48 x 4.7 k ohm resistors for the Gallagher Reader 8R Module
- 24 x 4.7 k ohm resistors for the Gallagher Reader 4R Module

2.2 Power Supply

The Reader Module processor power is supplied via the Controller 6000 interconnect plug. The "V in" connection on the Reader Module provides power to the "V out" connections and power to operate the relays and reader connections R1-R8.

Notes:

- The "V in" connection to the Reader Module must be powered from the same physical supply as the Controller 6000.
- Each "V out" connection on an 8R Module is limited to 750 mA.

2.3 Cabling

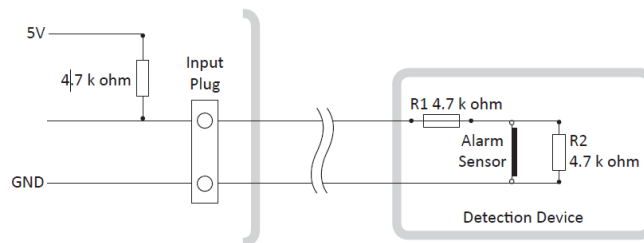
Reader Cabling

The readers should be connected using 4 core, 0.2 mm² (AWG 24) cabling. The maximum distance between the Reader Module and the readers with this cable is 200 m (650 ft).

Balanced Input Cabling

Cabling should be a minimum size of 0.2 mm² for all inputs. For UL compliant installations, the minimum cable size shall be 22 AWG.

To ensure correct tamper detection (short or open circuit), the balanced inputs require 4.7 k ohm resistors to be connected as close as possible to the device being monitored.



Output Relay Cabling

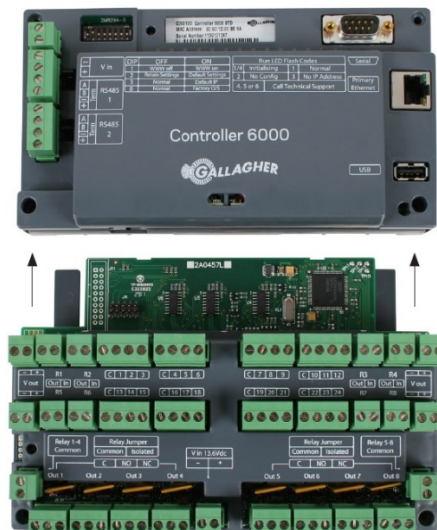
The cabling to and from the relay connectors must be capable of carrying sufficient current for the device the relay is controlling.

3 Installation



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

1. Lay both the Controller 6000 and Reader Module on a flat surface. Align the bottom edge of the Controller 6000 with the top edge of the Reader Module, as shown below.



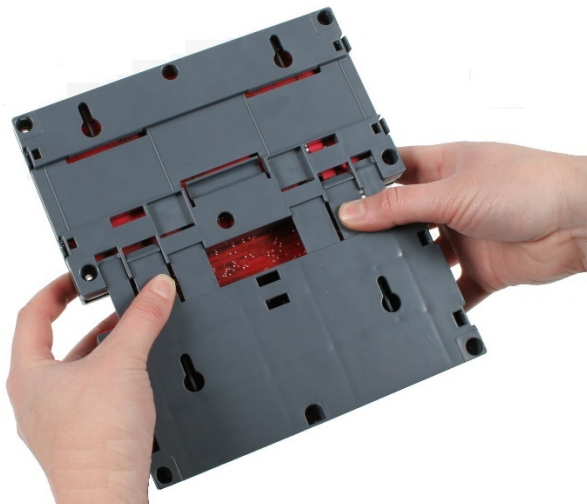
IMPORTANT: Damage to the pins may occur, if the two PCBs are not correctly aligned. Therefore, it is important to lay the two PCBs on a flat surface when connecting them.

2. Gently push the two PCBs together until they click into place.
3. Once connected, the Controller 6000 and Reader Module can be mounted in a standard Cabinet using the 16 mm M3 screws provided, (i.e. four for the Controller 6000 and two for the Reader Module).
4. Install all the system and power cables. The cables should stow neatly and be held in place by the cable clamps fitted into the base of the Cabinet.
5. Install the component identification decal inside the Cabinet door. This decal enables you to enter wiring and connection details and identifies the location and designation of cable connections, fuses, LEDs, etc.
6. Initialise the Controller 6000. Refer to the "Initialisation" topic in the *"Gallagher Controller 6000 Installation Note"* (part number 3E2028).
7. Fix the Controller 6000 product label to the outside of the Cabinet door and enter the relevant details.

4 Removing the Reader Module

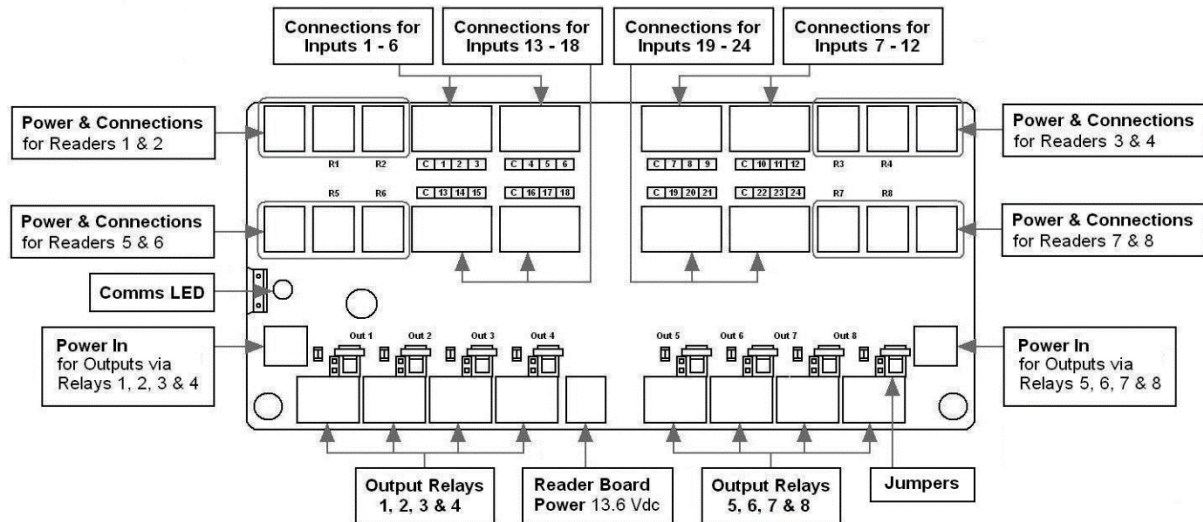
Note: Although you may only want to remove the Reader Module from the Cabinet, because it is fitted to the Controller 6000 module, you will need to remove both modules before separating them.

1. Disconnect the power from the Controller 6000 and Reader Module.
2. Following full antistatic precautions, disconnect all cables from the Controller 6000 and the Reader Module.
Hint: Label each cable as you remove it.
3. Remove the 16 mm M3 securing screws that hold the Controller and Reader Module onto the Cabinet fixing standoffs.
4. Carefully lift the Controller and Reader Module clear of the Cabinet.
5. To disconnect the Reader Module from the Controller 6000, turn the PCBs over and press the two clips joining the two PCBs with your thumbs. Gently disconnect the two PCBs.

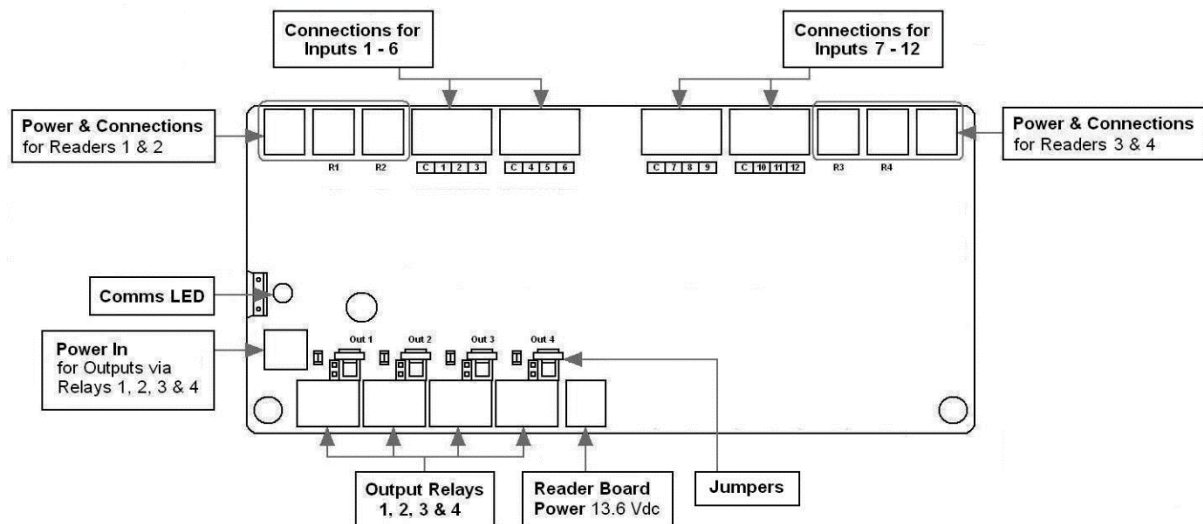


5 Component Layouts

5.1 8R Module



5.2 4R Module



6 Readers

Cardax IV readers connect using a 4 wire cable. Two wires are for the DC power supply "V out" and two are connected to R In and R Out respectively, for each reader.

R1 = Reader 1 (4R and 8R versions)

R5 = Reader 5 (8R version only)

R2 = Reader 2 (4R and 8R versions)

R6 = Reader 6 (8R version only)

R3 = Reader 3 (4R and 8R versions)

R7 = Reader 7 (8R version only)

R4 = Reader 4 (4R and 8R versions)

R8 = Reader 8 (8R version only)

Wiegand data format readers require a 6 wire connection. Two wires are for the DC supply "V out" and four are required for data. R1 In & Out and R2 In & Out.

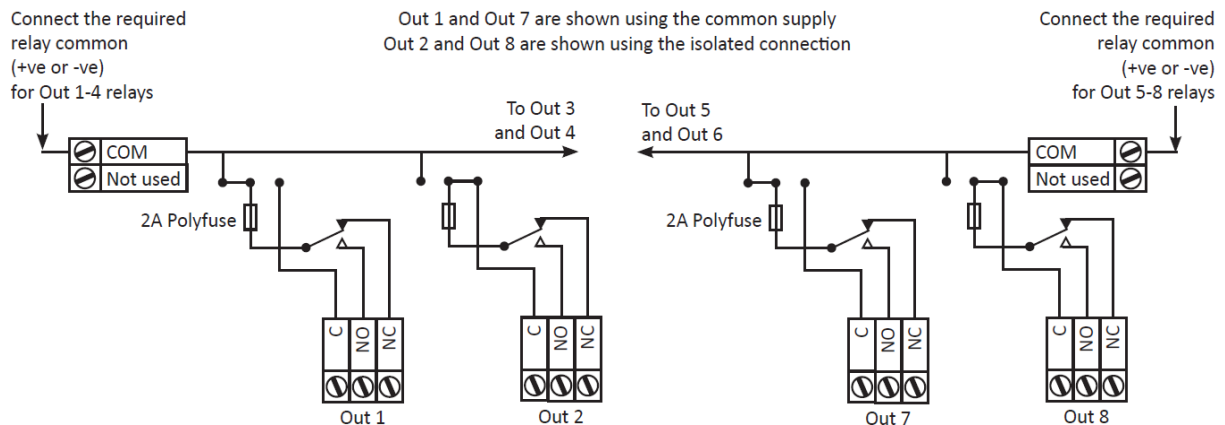
R1&2 = Reader 1 (4R and 8R versions) R5&6 = Reader 3 (8R version only)

R3&4 = Reader 2 (4R and 8R versions) R7&8 = Reader 4 (8R version only)

If a connected Wiegand reader has such a line, it should be connected to the +12 pin or the ground within the Reader Module as specified by the Wiegand reader manufacturer.

7 Relay Jumpers

Each output relay has an associated jumper plug to allow the relay common to be either connected to a common supply connection, or to be individually connected to supply connections.



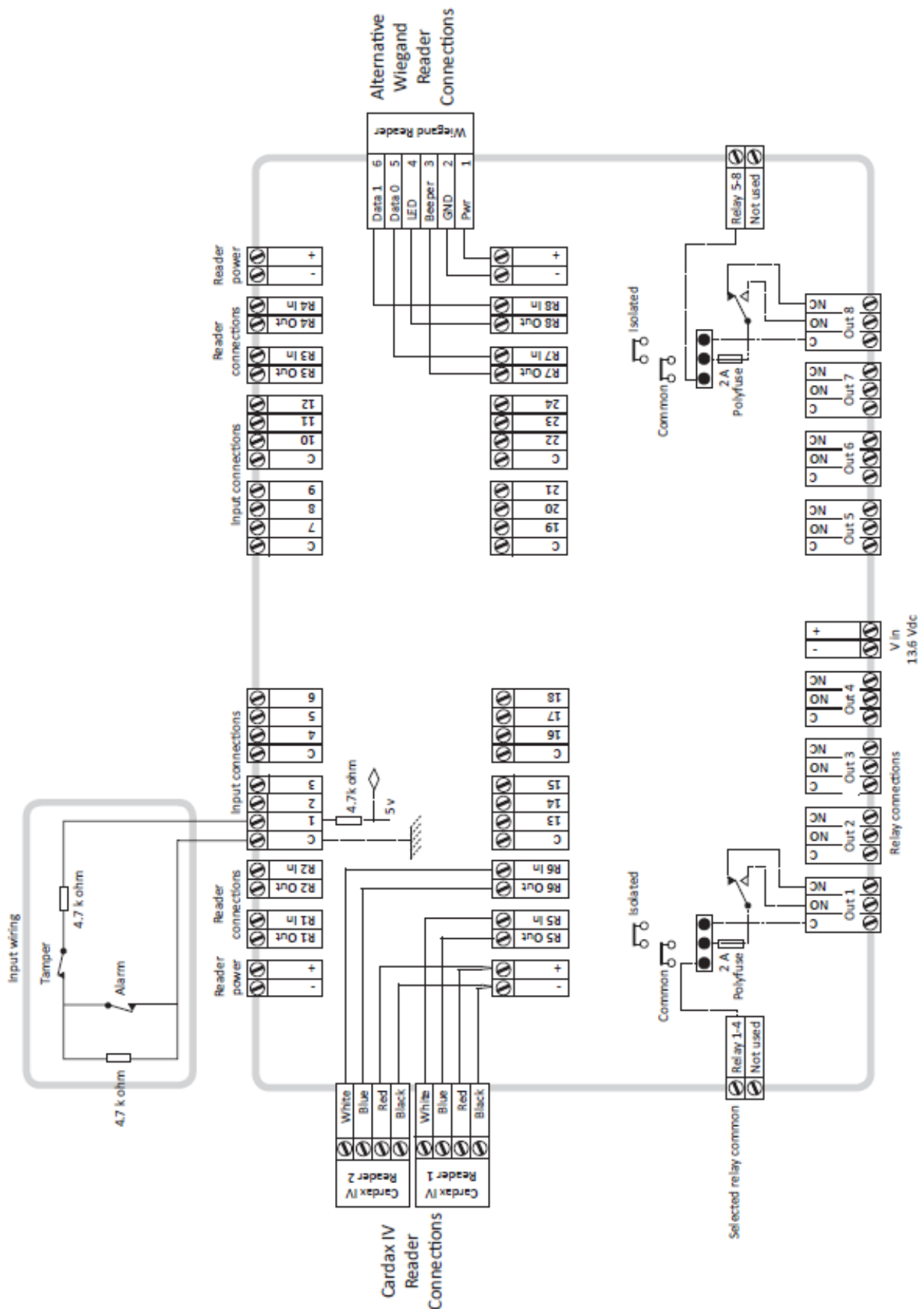
Position 1

Jumper is in the left hand position, connecting the relay common directly to the Relay 1-4 common and the Relay 5-8 common respectively, each via a 2 A polyfused.

Position 2

Jumper is in the right hand position, connecting the relay common to the "C" screw terminal associated with the relay each via a polyfused.

8 Wiring Diagram



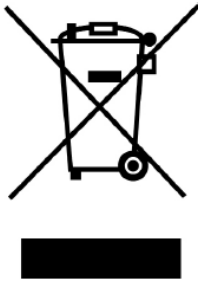
9 Comms LED Diagnostic Indications

LED	Diagnostic Indication
3 Flash (Red)	No communications with the Controller
1 Flash (Red)	Functioning normally

10 Technical Specifications

Power Supply:	
Voltage	13.6 + 15% Vdc
Current	
via Gallagher Controller 6000 connector:	20 mA
via Power In:	
No relays operated, no readers connected	40 mA
4 relays operated, no readers connected	180 mA
8 relays operated, no readers connected	320 mA
(If readers are connected, a maximum of 0.75 A per "V out" port is available. This additional current should be added to the Power In currents specified above.)	
Environmental:	
Operating temperature	-10°C to +55°C
Humidity	95% non-condensing
Inputs:	
4R Module	12
8R Module	24
Outputs:	
4R Module	4 SPDT relays
8R Module	8 SPDT relays
Relay circuit rating	24 Vdc/ac
	2 A resistive, 1 A inductive (polyfuse)
Readers:	
4R Reader Module	4 Cardax IV or 2 Wiegand
8R Reader Module	8 Cardax IV or 4 Wiegand
Reader power outputs	4 x 750 mA outputs (polyfuses)

11 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.



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 B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Note: Changes or modifications not expressly approved by Gallagher Group Limited could void the user's authority to operate the equipment.

UL Installations

Please refer to the document "3E2793 Gallagher Command Centre UL Configuration Requirements" for a guide to configuring the Gallagher system to the appropriate UL Standard. Installers must ensure these instructions are followed to ensure the installed system is UL compliant.

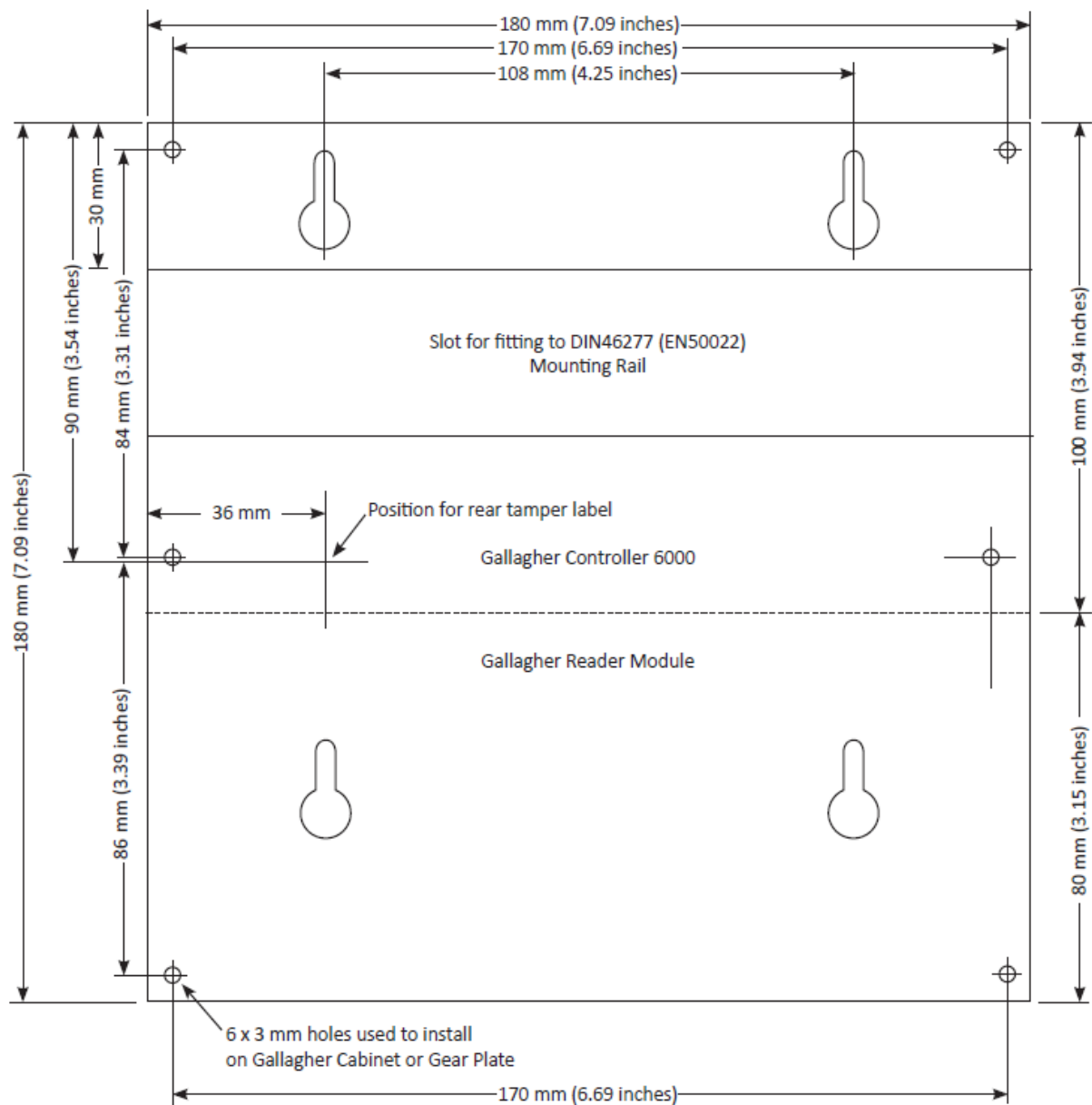
AS/NZS IEC 60839.11.1:2019 Grade 3, Class II

UK CA



US - Equipment: com, burg and acc module
CA - Equipment: com, burg module

12 Mounting Dimensions



IMPORTANT

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