Installation and User Guide

PHP400 Help Point

VoIP (1193) version
With Ampetronic HLS-DM2 Induction Loop Amplifier
48V DC power supply

IMPORTANT
THIS PRODUCT MUST BE CONFIGURED PRIOR TO INSTALLATION
PLEASE READ THIS GUIDE FIRST

GAI-TRONICS

A division of Hubbell Ltd.

CONTENTS

1. Safety and Care Information

▲ **IMPORTANT:**

THIS PRODUCT CAN CONTAIN HAZARDOUS VOLTAGES. IT IS ESSENTIAL THAT THE WATERPROOF SEAL IS PROPERLY MADE DURING INSTALLATION, TO ENSURE THAT WATER CANNOT GET INTO THE ENCLOSURE. THE INGRESS OF WATER CAN CAUSE ACCESSIBLE PARTS OF THE TELEPHONE TO BECOME LIVE, AND THEREFORE MUST BE PREVENTED AT ALL COSTS.

▲ **Please read these instructions thoroughly before starting installation. These products must be installed by competent personnel familiar with electrical and network installations.**

▲ **Refer to safety information is section 5.2 if hazardous voltages (eg mains) are to be connected to this product.**

▲ **Make sure that correctly-sized cable glands are used, and that cables are securely clamped in the clamps provided. Failure to do so could result in an unsafe installation.**

▲ **Take adequate precautions when opening the case or installing. Isolate connections elsewhere before opening.**
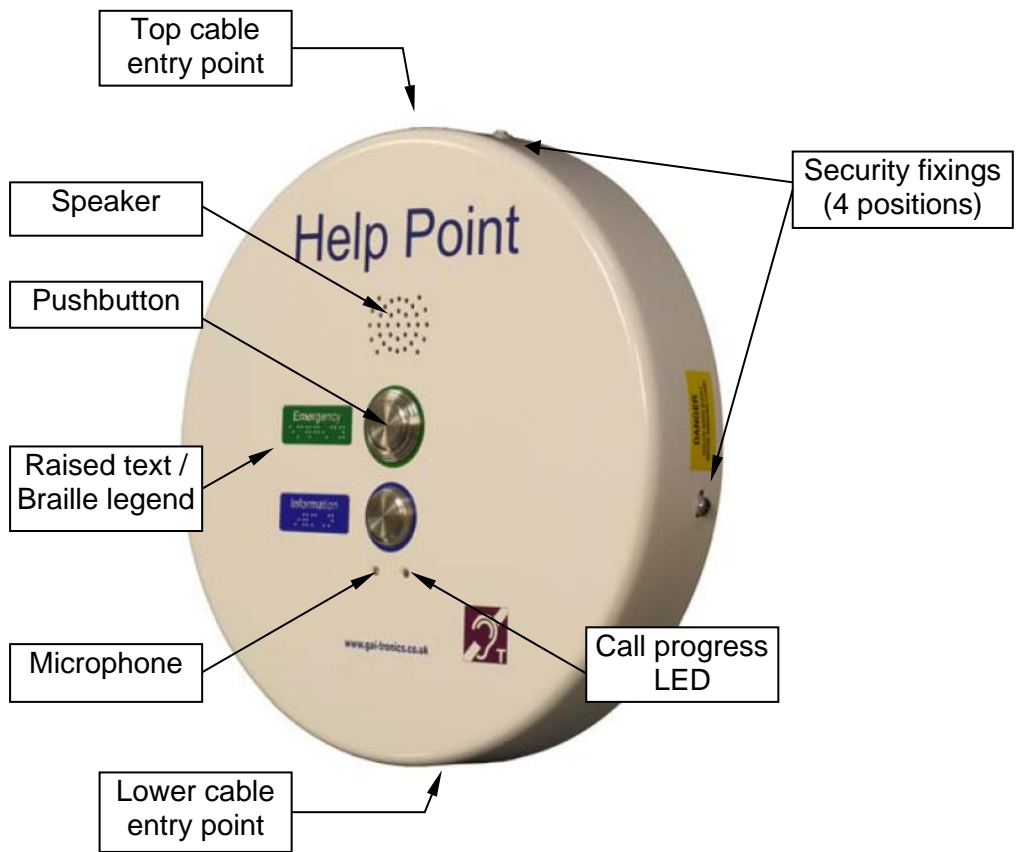
2. Product Description and Features

This manual describes the voice over internet protocol (VoIP) versions of the GAI-Tronics 400mm circular Help Point, with part numbers in the range 122-02-xxxx-xxx.. The products are based on the main VoIP PCB part numbered 999-02-1193-xxx and are often referred to as "1193" versions to distinguish them from the previous ranges of VoIP telephones, which were based on a 1075 PCB. Product features include:

- Weather and vandal resistant casing
- Large, palm-operable, vandal resistant buttons
- Internal induction loop
- Raised text and Braille legends
- Wide operating temperature range
- 48Vdc powered
- Automatic outgoing call diversion (memory list)
- SIP compatible (RFC3261)
- Real-time alarm reporting via SNMP
- Configurable via web page, SNMP or download
- 4 auxiliary inputs, 2 volt-free contact outputs

Models are available with different pushbutton options.

The Help Point casing is a two-part construction with electronics in both sections. The 2 sections are held together with 4 security screws though the sides, and there are several cables between the 2 sections. Cable entry points are provided to top and bottom of the casing. Blanking plugs are provided for unused cable entries.

Top cable
entry point

Security fixings
(4 positions)

Speaker

Help Point

Pushbutton

Emergency

Raised text /
Braille legend

Information

www.gai-tronics.co.uk

Microphone

Call progress
LED

Lower cable
entry point

3.   Quick Start Guide

Full programming and configuration details are contained in the Configuration guide, available from

www.hubbell.com/gai-tronics/en/voip-support
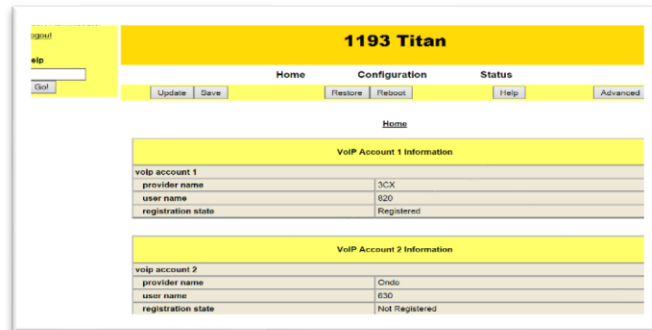
The factory defaults will generally be sufficient in most cases, but the following steps must be taken as a minimum:

- Provide an Ethernet connection and power (either 24-48Vdc or PoE)
- Ensure that a DHCP server is available on the network, and that the IP address allocated to the telephone can be discovered (DHCP is the normal factory default provisioning method). If DHCP fails (or there is no DHCP server) the telephone will revert to a default IP address of 192.168.1.2 after a few minutes
- Using a web browser, browse to the IP address.
- When prompted, enter the user name and password (Defaults: **user** & **password**)
- From the Home Page, select the Configuration section, and from that the VoIP Accounts main page
- On the VoIP Account 1 Information sub-page, enter:
    - The user name (the extension number or name used by the SIP server for this telephone)
    - Domain name, Proxy domain name and Register domain name – set all of these to the domain name or IP address of the SIP server
    - Auth user password – set to the authentication password for the extension on the SIP server if required.
    - Ensure Provider enable and Register enable are both set to enable.
    - Update the changes, then save the changes.
    - Check that the registration state changes to "registered"
- Program any speed dial memories using the User Configuration main page

4. Installation and dimensions

4.1. General

IMPORTANT

THIS PRODUCT CAN CONTAIN HAZARDOUS VOLTAGES. IT IS ESSENTIAL THAT THE WATERPROOF SEAL IS PROPERLY MADE DURING INSTALLATION, TO ENSURE THAT WATER CANNOT GET INTO THE ENCLOSURE. THE INGRESS OF WATER CAN CAUSE ACCESSIBLE PARTS OF THE TELEPHONE TO BECOME LIVE, AND THEREFORE MUST BE PREVENTED AT ALL COSTS.

All possible measures must be taken to ensure water, fluid or dust does not contaminate the internal components of the unit whilst unpacking, preparing and installing it in inclement weather conditions or by negligence.

Do not drill any additional holes in the casing. Make sure any unused cable entry or mounting holes are properly sealed against water or dust ingress.

Failure to do so may result in an unsafe condition and will invalidate your warranty.

4.2. Units dimensions and weight

Overall diameter	405mm
Depth (rear surface to front face)	88mm
Pushbutton height from front face	10mm
Unit weight	6.5kg
Mounting centres	4 x 7mm holes on 145 x 270mm centres, see drawing 112-11-0081-001 appended to this manual.
Cable entries	5 off 20mm gland entry points are provided, with blanking plugs to blank off any that are not used: 2 x rear 2 x lower 1 x upper (used for aerial) Positions are detailed on drawing 112-11-0081-001 appended to this manual.

4.3. Site requirements

Having configured the unit for the intended network, ensure that the following are available for installation:

1. Power supply: 48V dc @ 2A.

2. Ethernet connection – 10/100BaseT on CAT5/CAT5e UTP cable, the cable run is normally limited to 95m.

3. This is normally a two-person installation, due to the size/weight of the unit and due to the need to connect cables between the 2 sections.

4.4. Opening the Unit

To open the case, undo the 4 security screws around the edge of the unit. These screws are normally Torx type with a centre security pin.

The front section is fitted over the rear section and can be gently lifted clear.

Take care when separating the 2 sections – there are 4 cable sets between the 2 halves:

1. Induction loop audio (2 conductors)
2. DC power (2 conductors)
3. Earth cable
4. Ethernet cable.

These cables are deliberately short, but will allow the front section to sit to the left of the rear for set-up purposes if required.

4.5. Installation method

The Help Point is intended for vertical installation to a solid wall or suitable post as detailed below.

1. Ensure the Help Point has been configured for the network as described in section 3.
2. Choose a suitable location for the Help Point, bearing in mind the weight of the unit, and that the operating button(s) should normally be in the range 1200 – 1400mm from the ground for ease of access by people in wheelchairs.
3. Mark the wall or surface with fixing centres as shown above. If necessary use the rear section to help mark the centres. Do not use the rear section as a drilling template.
4. Select fixing screws or bolts appropriate to the type of wall or surface, suitable to support the unit. Drill fixing holes to suit.
5. Separate the front and rear sections of the Help Point, taking care to disconnect interconnecting cables as described in section 5.3.
6. Secure the rear section to the wall, making sure that the fixing holes are sealed to prevent water ingress using nylon washers or other appropriate sealing methods.
7. Bring power and Ethernet cables into the unit through one or both of the cable entry holes. Cables will normally be contained in conduit, but glands may also be used.
8. The power cable is terminated directly to the terminal block provided, and secured using the cable restraint.
9. The ethernet cable should be left long enough to allow connection to the front section (approximately 450mm from entry point) and terminated with an RJ45 plug.
10. Ensure that cable entries are sealed to prevent water ingress. If glands are used do not over tighten – CAT5 UTP can be damaged by excess tightening. If only one cable entry is used, the blanking plug fitted to the second position must be left in place.
11. Connect induction loop audio, dc power, ethernet and earth cables to the front section of the case.
12. Apply power. The LED on the internal PSU should illuminate. After approximately 1 minute the red "heartbeat" LED inside the VoIP module should be visible flashing.
13. Fit the front section over the rear section and secure in place using the 4 security screws.

## 5. Connections

5.1. DC Power connections

Connect a 48V DC power supply to the terminal block as shown on the connection label.

If a 48V power supply is not available, GAI-Tronics can supply a suitable unit, see spare parts (section 8).

One power supply cannot supply more than one PHP400 - a separate, isolated supply must be provided for each unit..

Cabling from the 48V supply to each PHP400 must be sufficient to provide the required current (2A) without causing a significant voltage drop over the required distance.

The fuse must always be replaced by the correct type, ie 3.15A T (20x5mm).
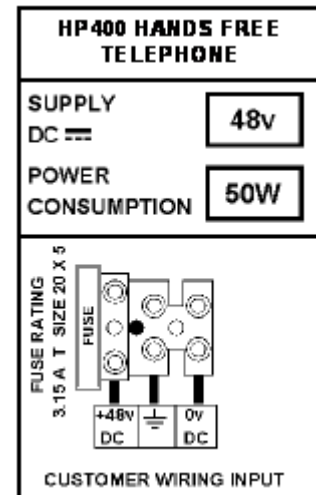
5.2. IMPORTANT SAFETY INFORMATION

Please pay particular attention to the following points if hazardous voltages (>48V) are to be connected to either of the control outputs:

The circuits that the relay contacts are connected to must be of the same type, i.e. Both mains or both low voltage. It is not permissible to mix the types of circuit connected to these relays. They must be installed in strict accordance with these instructions. It is the installer's responsibility to ensure that any live or hazardous conductors are properly connected, not accessible to users, and that the equipment is left in a safe condition.

It is acceptable to connect mains circuits in the frequency range 45 to 65 Hz to these relays.

For currents up to 3 Amps, the minimum conductor cross sectional area must be 0.75 mm^2 (19awg) for flexible cords, or $1mm^2$ (18awg) for other cables. For currents up to 10 Amps, the minimum conductor cross sectional area must be 1 mm^2 (18awg) for flexible cords, or 1.5mm^2 (16awg) for other cables.
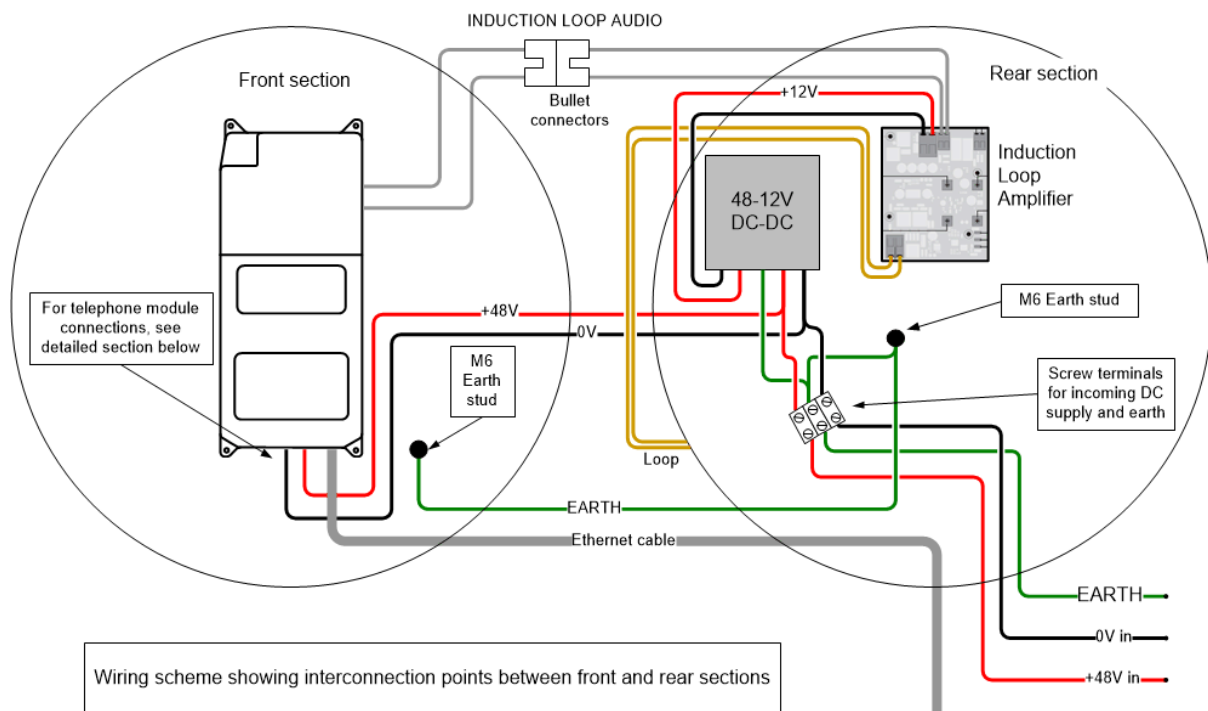
Circuits connected to these relays must be protected against over-current and short circuit by a suitable method, for example a fuse or circuit breaker rated at less than or equal to the relay contact rating.

The use of an isolated supply or an RCD is recommended for these circuits.

Cables must be correctly rated and specified for the intended environment, and of indoor or outdoor type as appropriate.
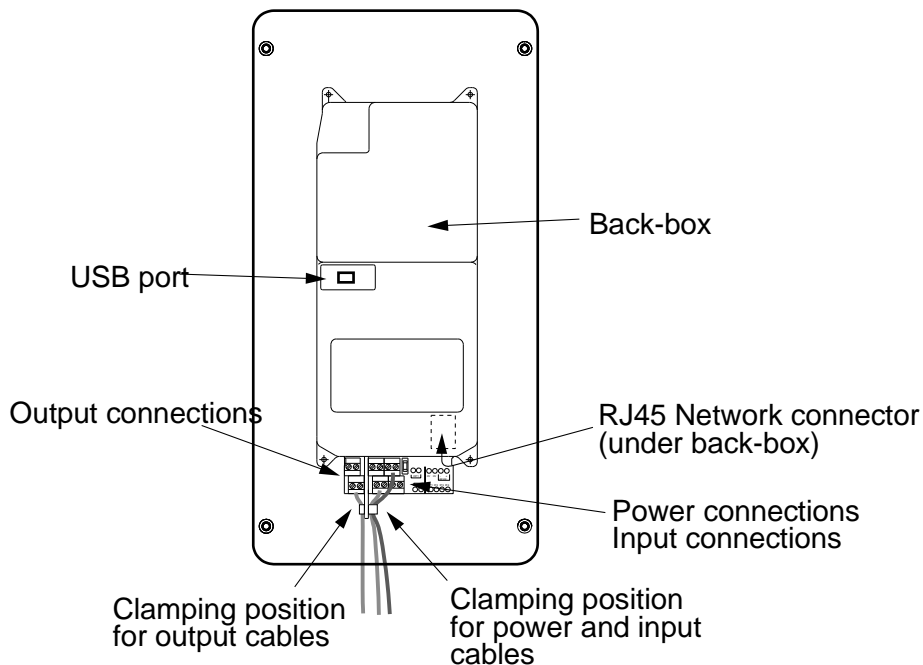
Always ensure that sufficient clearance is maintained between hazardous voltages and any accessible conductive parts.

## 5.3. Connections between front and rear sections

INDUCTION LOOP AUDIO

Front section

Bullet connectors

+12V

Rear section

Induction Loop Amplifier

48-12V DC-DC

For telephone module connections, see detailed section below

M6 Earth stud

M6 Earth stud

+48V

0V

Screw terminals for incoming DC supply and earth

M6 Earth stud

Loop

EARTH

Ethernet cable

EARTH

0V in

+48V in

Wiring scheme showing interconnection points between front and rear sections

5.4. Connections to the VoIP module

Make the appropriate connections as shown on the diagrams below.

Back-box

USB port

Output connections

RJ45 Network connector (under back-box)

Power connections
Input connections

Clamping position for output cables

Clamping position for power and input cables

Take particular note of the cable clamping arrangements – all cables must be securely clamped in the clamps provided.

Clamp cables by bending tabs
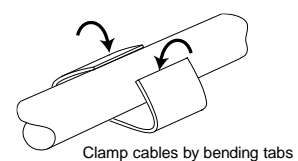
Connection types and ratings:

- LAN connection - RJ45 on Cat5 or Cat5e UTP cable

- All other connections - 0.14mm² to 2.5mm² (26 to 14awg) for rigid/solid cables, 0.14mm² to 1.5mm² (26 to 16awg) for flexible/stranded cable.

**Refer to safety information in section 5.2**

**Output 1** - rating 2A at 250Vac, 2A at 30Vdc

Output 2 - 3A at 250Vac, 1A at 24Vdc

(Note: for Output 1, a continuous current of 2A will cause a 22°C temperature rise to the PCB area close to the terminals after 10mins. If the current is below 1A this temperature rise will be less than 5°C. Output 2 will not give any significant temperature rise up to its rated current of 3A)

Power Connection - 48Vdc from external supply, connected via terminal block in rear section. Note that the VoIP module itself requires only 100mA from the 48V supply – the majority of the power is required by the induction loop amplifier fed by the 48-12V DC-DC converter.

Control inputs - for connection to voltage free contacts only. Internal pull-up resistor source current = 300uA. These inputs form part of a SELV circuit and precautions must be taken to prevent hazardous voltages being applied to these circuits
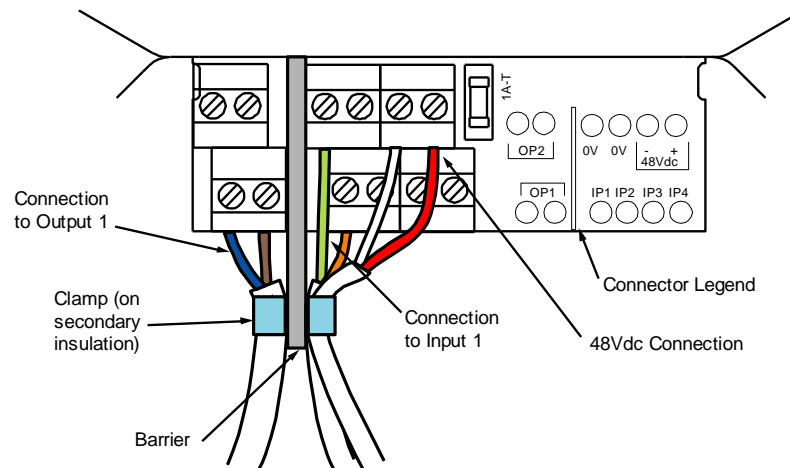
Cabling example showing connections to Input 1, Output 1 and external 48Vdc.
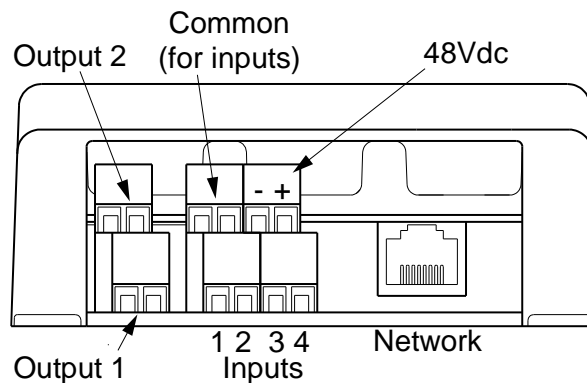
End view of Connectors

6. Cleaning

Recommended cleaning methods are outlined below:

6.1. Normal Cleaning

For normal cleaning we recommend "Virosol", manufactured by Clover products. Carefully follow manufacturer's instructions for storage, handling and use.

6.2. Stainless Steel Push-buttons

Stainless steel push-buttons, where fitted, should be cleaned regularly especially if the Help Point is in a marine environment. The stainless steel may show signs of discolouration or rust – this will not damage the buttons or impair their performance but may look unsightly and can be cleaned off using normal cleaning agents as above. In extreme cases a mild abrasive may be necessary.

6.3. Graffiti

For graffiti, paint and ink we recommend the use of 3M GR2 graffiti stain remover. CAUTION: This is a very aggressive chemical. Pay close attention to the manufacturer's recommendations for storage, handling and use.

6.4. Anti-Graffiti Coating

Where polyurethane anti-graffiti coating or paint has been specified (as an option), it can be cleaned using Methylated Spirits or Methyl Isobutyl Ketone. Other cleaners can be used but should be tested on a small area first.

7. Aftercare

The purchase of your GAI-Tronics product does not end our commitment to you.

In addition to our warranty obligations, GAI-Tronics are able to offer various levels of maintenance packages, installation and commissioning packages and technical support, from ad-hoc repairs to full maintenance contracts.

By choosing GAI-Tronics as your aftercare provider you are ensured of manufacturer expertise and ISO 9001-certified quality control standards throughout the life of the product.

We can also supply a full range of accessories including mounting posts, beacons and high-volume sounders.

Contact GAI-Tronics for details. https://www.hubbell.com/gai-tronics/en/

8. Repairs and Spare Parts.

It is recommended that Help Points are returned to GAI-Tronics for service or repair, to ensure that any repairs are fully tested. In the event of work having to be carried out on site, the following spare parts are available:

Part No	Description	Notes
122-02-xxxx-xxx	Complete Help Point	The part number will vary with product options and will be printed on a label inside the case.
100-02-7014-013	Main VoIP PCB	A spare 1193 PCB pre-configured for a Help Point telephone.
999-02-1098-003	Carrier PCB	Includes microphone and LED
610-99-0421-000	48-12V DC-DC converter	
610-99-0425-001	Mains to 48V Power Supply	Mounted external to Help Point (usually in electrical cabinet). Not water protected.
610-99-0691-001	Induction loop amplifier	Ampetronic HLS-DM2

9. Technical Specifications

Product features	
Power supply	Nominal 48Vdc, 1A. (Voltage range: 36-56V)
Ringer loudness	80dBA @ 1m
Network	10/100 BaseT Ethernet RJ45, Cat5 or Cat5e UTP Static IP provisioning or DHCP
Call Control Signalling	SIP (RFC3261 compliant) Loose routing
External inputs	4 auxilliary inputs, volt free, (internal pull-up resistor source current = 300uA)
External outputs	Ratings: Output 1 - 2A at 250Vac, 2A at 30Vdc Output 2 - 3A at 250Vac, 1A at 24Vdc **REFER TO SAFETY INFORMATION IN SECTION 5.2** *(Note: for Output 1, a continuous current of 2A will cause a 22°C temperature rise to the PCB area close to the terminals after 10mins. If the current is below 1A this temperature rise will be less than 5°C.* *Output 2 will not give any significant temperature rise up to its rated current of 3A)*
Codecs & Audio	G.711 A-Law G.711 µ-Law G.729 Codec preference sequence Configurable comfort tones (to emulate national tones)
Configuration	Embedded web server SNMP Configuration file download SNTP with timezone and daylight saving Automatic updating via TFTP Password protection
Monitoring and Reporting	SNMP Automatic fault reporting Handset integrity monitoring
Call Diversion	Configurable call lists (max 30 entries) Numbers or URIs Divert to next in list if the call fails

Environmental limits	
Temperature:	Operating: -20°C to +60°C (-4°F to 140°F) Storing: -40°C to +70°C (-40°F to 158°F)
Relative Humidity	Up to 95% (non-condensing)
Ingress Protection	IP65 to EN60529– Degrees of protection provided by enclosures.
Physical characteristics	
Casing material	Front section: Stainless steel Rear section: Mild steel, zinc coated Finish: Polyester powder coated
Weight	6.5kg (11lbs).
Dimensions	405mm diameter. 88mm depth. Buttons may protrude a further 10mm from front face.

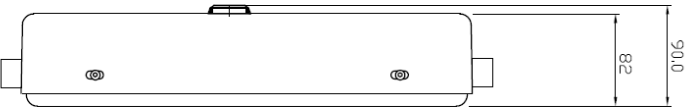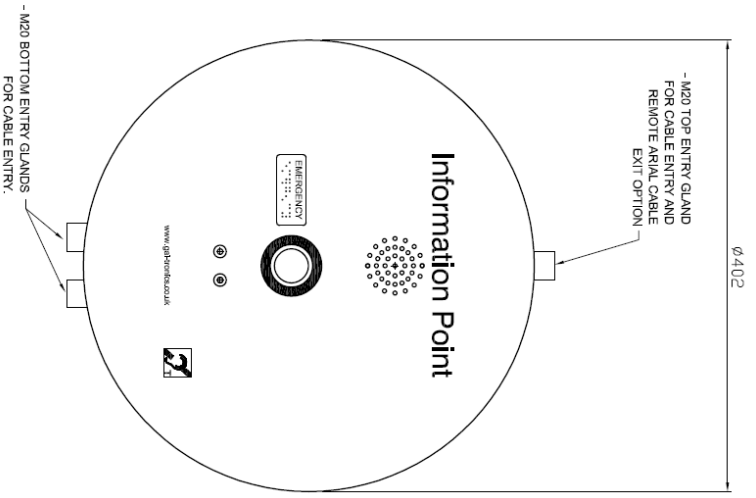| Compliance to standards	
EMC	EN 55032 - Electromagnetic compatibility of multimedia equipment - Emission requirements
	EN 55035 - Electromagnetic compatibility of multimedia equipment - Immunity requirements
	EN 50121-4 - Railway applications, emission and immunity
	Federal Communications Commission Statement
	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.
	ICES-003 Class A
Safety	EN 60950-22 Information technology equipment. Safety. Equipment installed outdoors
	EN 62368-1 Audio/video, information and communication technology equipment. Safety requirements

Safety	EN60950-1 – Specification for information technology equipment, including electrical business equipment. BS6317:1992 (Clause 13.9) - Specification for simple telephones for connection to public switched telephone networks run by certain public telecommunication operators. EN50371 - Generic standard to demonstrate the compliance of low power electronic and electrical apparatus with the basic restrictions related to human exposure to electromagnetic fields (10 MHz - 300 GHz). General public.

Recycling Information	The symbol shown here and on the product means that the product is classed as Electrical or Electronic Equipment and should not be disposed with other household or commercial waste at the end of its working life.	
	The Waste of Electrical and Electronic Equipment (WEEE) Directive has been put in place to recycle products using best available recovery and recycling techniques to minimise the impact on the environment, treat any hazardous substances and avoid the increasing landfill.	
	Business users should contact their suppliers and check the terms and conditions of the purchase contract and ensure that this product is not mixed with other commercial waste for disposal.	

10. CE Declaration

A copy of the current CE Declaration of Conformity is available from our website
https://www.hubbell.com/gai-tronics/en/product-certificates-uk

FRONT VIEW

Information Point

EMERGENCY
www.gai-tronics.co.uk

- M20 TOP ENTRY GLAND FOR CABLE ENTRY AND REMOTE ARIAL CABLE EXIT OPTION.

- M20 BOTTOM ENTRY GLANDS FOR CABLE ENTRY.

Ø402

SIDE VIEW

82
90.0

INTERNAL VIEW
REAR CASE (COVER REMOVED)

2 BUTTON OPTION
1 BUTTON OPTION

M20 REAR ENTRY GLANDS FOR CABLE ENTRY.

162
105
134
270.00
145.00
25 25

42.5
Ø393.0 (OUTSIDE)
Ø373 (OUTSIDE)
60
25 25
60
50,5
75.0 OUTSIDE
50,5

POST MOUNTING OPTION

Information Point

EMERGENCY
www.gai-tronics.co.uk

1066
POST 501-20-0697-002

NOTES:-
1 - ROUND HELP POINT:-
- VoIP HANDS FREE TELEPHONE 1 & 2 BUTTON OPTIONS
- GSM TELEPHONE HANDS FREE 1 & 2 BUTTON OPTIONS
- EUROPHONE HANDSFREE TELEPHONE 1 & 2 BUTTON OPTIONS

2 - THE ROUND HELP POINT HOLE FIXING PATTERN IS THE SAME AS THE TITAN , COMMANDER, VR AND DDA RANGE OF TELEPHONES.

THIS DRAWING CONFORMS TO BS 8888: 2000.
HUBBELL STANDARD SPECIFICATIONS MUST BE COMPLIED WITH U.O.S. ALL DIMENSIONS ARE IN MILLIMETRES U.O.S.

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CAN CODE:
STRIKE OUT INAPPROPRIATE CODES

MANUFACTURING CODE:
0=FACT 4=SASY
1=RMAT 5=RNG
2=BAT 6=PHTM
3=MANP

TOLERANCES (U.O.S.) :-
TWO DEC. PLACES: ± 0.2
ONE DEC. PLACE: ± 0.5
NO DEC. PLACES: ± 1
HOLE TOLERANCES: ± 0.1
ANGLE TOLERANCES:± 0.1

CERT AUTHORITY DETAILS:

PROJ. REF.: 33848
PAPER: A3
SHELF LIFE: N/A
GOODS-IN INSP.: YES
SINGLE SOURCE APPROVAL
SCALE: NTS
CAD Ref.: 11001A2

ISSUE	DATE	CHANGE DETAILS	DRAWN	CHECK	APPROVED
001	19-11-09		HD	SS	TF
002	24-01-11	ON33848-021	HD	RR	
		ON35732-002	CM	RR	

DO NOT SCALE THIS PRINT

TITLE:
ROUND HELP POINT INSTALLATION INFORMATION FOR VoIP & GSM VERSIONS

VOCAB/DRG. No:
112-11-0081-001

Sheet 1 of 1