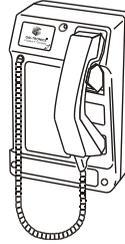
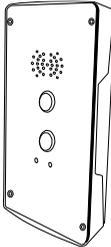


Titan



Commander



Help Point



Sentinel

Installation and User Guide

Rugged VoIP Telephone

Titan, Commander, Help Point and Sentinel
(1193 models)

IMPORTANT
THESE PRODUCTS MUST BE CONFIGURED PRIOR TO INSTALLATION

PLEASE READ THIS GUIDE FIRST

GAI-TRONICS

A division of Hubbell Ltd.

CONTENTS

1.	Safety and Care Information.....	4
2.	Overview	4
3.	Quick Start Guide	7
4.	Mounting methods and dimensions	8
4.1.	General	8
4.2.	Titan	9
4.3.	Commander	14
4.4.	Help Point.....	17
4.5.	Sentinel	19
5.	Connections and Installation	22
5.1.	General	22
5.2.	IMPORTANT SAFETY INFORMATION	23
5.3.	Emergency Services warning.....	23
5.4.	Titan Installation	24
5.5.	Titan Connections	24
5.6.	Commander Installation	26
5.7.	Commander Connections.....	27
5.8.	Help Point Installation.....	28
5.9.	Help Point Connections.....	29
5.10.	Sentinel Installation	30
5.11.	Sentinel Connections	30
6.	Cleaning	32
6.1.	Normal Cleaning	32
6.2.	Stainless Steel Push-buttons	33
6.3.	Graffiti.....	33
6.4.	Anti-Graffiti Coating.....	33

7.	Aftercare	33
8.	Technical Specifications	34
9.	CE Declaration	37

1. Safety and Care Information

The safety instructions for these products are contained in a separate document, no **502-20-0171-001**, which is included as a paper copy with every individual telephone and is available online from:

<https://www.hubbell.com/gai-tronics/en/iom-user-guides>

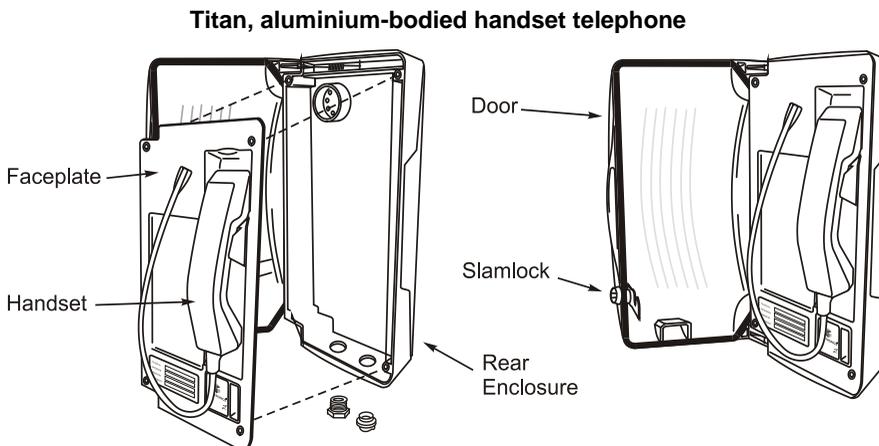
2. Overview

This manual describes the voice over internet protocol (VoIP) versions of the Titan, Commander, Help Point and Sentinel telephones, with the following part number ranges:

- Titan - 114-02-xxxx-xxx
- Commander - 115-02-xxxx-xxx
- Help Point / Sentinel - 116-02-xxxx-xxx

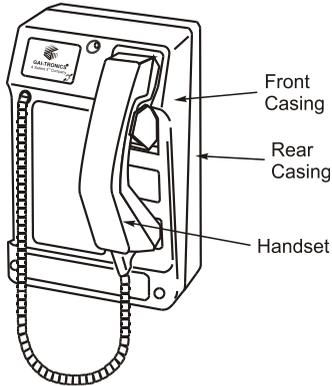
These product ranges incorporate a main VoIP PCB part numbered 999-02-1193-xxx. The products are often referred to as “1193” versions to distinguish them from the previous ranges of VoIP telephones, which were based on a 1075 PCB.

Images below are for illustration only.



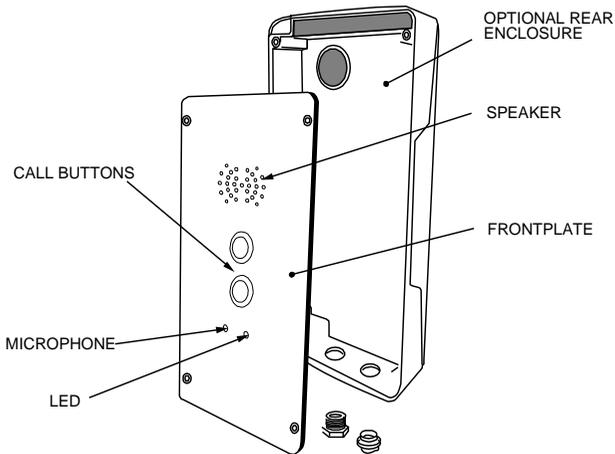
Models are available with different casing, keypad and handset options.

Commander, rugged glass-reinforced polyester handset telephone:



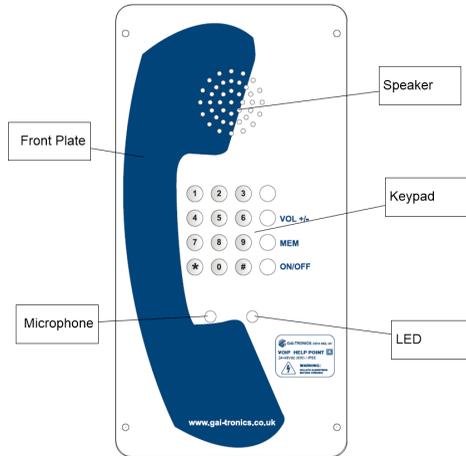
Models are available with different casing, keypad and handset options.

Help Point handsfree telephone:



Models are available with different quantities and styles of call button, with and without integral induction loop and with and without Braille button legends.

Sentinel full-dialling handsfree telephone:

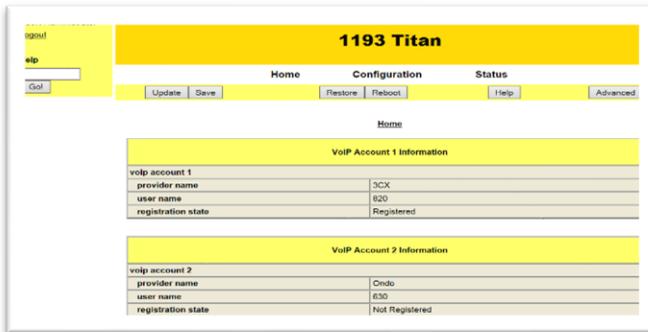


A hands-free telephone with stainless steel front plate and stainless steel full numeric keypad. An optional stainless steel rear enclosure is available.

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. Mounting methods and dimensions

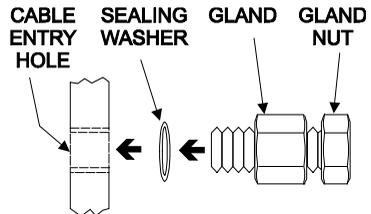
4.1. General

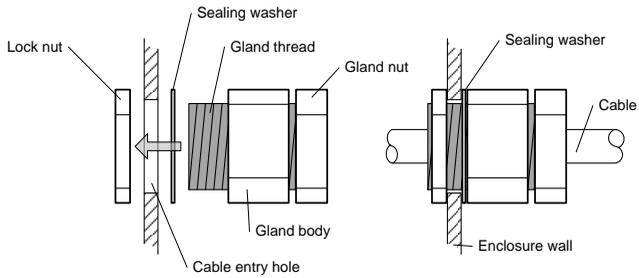
IMPORTANT

Installation details differ between the product ranges –please make sure you know which product you are installing and refer to the appropriate sections below.

Before mounting the telephone, check the cable routing and requirements. For products with a rear enclosure or case, fit gland(s) as follows:

1. Remove the RED blanking plug leaving the other (usually BLACK) in place.
Only fit a second gland if any external inputs or outputs are being used – cables for these should be routed through a separate gland to the network cable.
2. Note that 2 plastic glands are normally supplied with rear enclosures, but it is the installer's responsibility to select the correct type of gland for the application and cables used. The gland entries (and the supplied glands) are M20.
3. Select the appropriate sized gland:
Use the smaller gland for cables diameters 4 - 7mm (0.16 – 0.27in).
Use the larger gland for cable diameters 8 - 13mm (0.3 – 0.5in).
4. For enclosures with threaded gland entries, insert the selected gland from the outside of the case into the threaded cable entry hole and tighten, so that its sealing washer is compressed against the enclosure surface.
5. For thin-walled rear enclosures (available for Sentinel and certain types of Help Point), glands are supplied with lock-nuts as shown below. Note that the sealing washer is always compressed against the outer surface of the enclosure.





6. Following gland fitment, proceed with chosen mounting method below

IMPORTANT

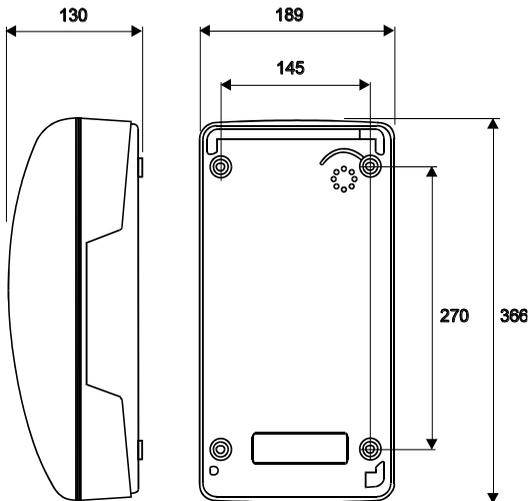
Glands are essential to clamp cables and to ensure a weatherproof seal. It is the installer's responsibility to make sure they are correctly selected and fitted. Failure to do so could result in an unsafe installation.

4.2. Titan

As standard, Titan with rear enclosure is supplied with 2 differently sized cable glands with sealing washers, 4 flanged sealing bushes and a 3mm Allen key.

Titan telephones supplied for flush mounting have no rear enclosure – see section 4.2.3 below.

4.2.1 Wall mounting



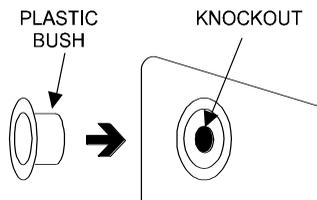
1. Using a suitable tool, punch out 4 holes in the rear enclosure, taking care not to damage or dislodge the plastic bushes. Only four of the eight holes are required - the outer ones are recommended. The inner holes are provided to be compatible with older-style mounting posts, and should be left intact if not used. If the inner holes are used they must be fitted with the supplied plastic bushes.

WARNING: *.An unsafe condition could occur (and your warranty will be invalidated) if :-*

1. *Any fixing hole made in the rear enclosure is left unused.*
 2. *Any additional holes are drilled into the telephone enclosure.*
 3. *Plastic bushes are not used on all fixing holes.*
-

2. Mark the wall with hole centres based on the dimensions shown (145 x 270mm, 5.7 x 10.63in). If necessary offer the rear enclosure up to the wall to check alignment. Do not use the enclosure as a template for drilling.
3. Drill holes in the wall on the marked positions. Select appropriate screws, wall plugs etc., for the type of wall, bearing in mind that the weight of the complete phone is around 5kg (11lbs).

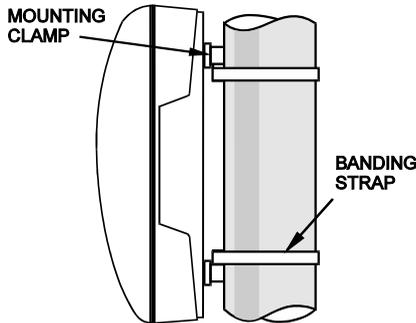
IMPORTANT: USE ONLY *countersunk-headed fixing screws. Check that screws seat properly in the plastic bushes to ensure a watertight seal. Do not use excessive tightening force, as this may crack the case.*



4. Ensure that all four plastic flanged bushes are in place and the rear enclosure is screwed tightly to the surface to prevent any water ingress through the punched holes.
5. Complete the installation by making the appropriate connections (section 5.5) and re-fitting the face plate.

4.2.2 Pole mounting

Kit No 100-02-0208-001



This accessory is for mounting GAI-Tronics telephones on to the side of round poles of 100mm to 200mm diameter (4 - 8in), or on to square or rectangular section uprights of 100mm to 150mm (4 – 6in) across the mounting surface.

NOTE:

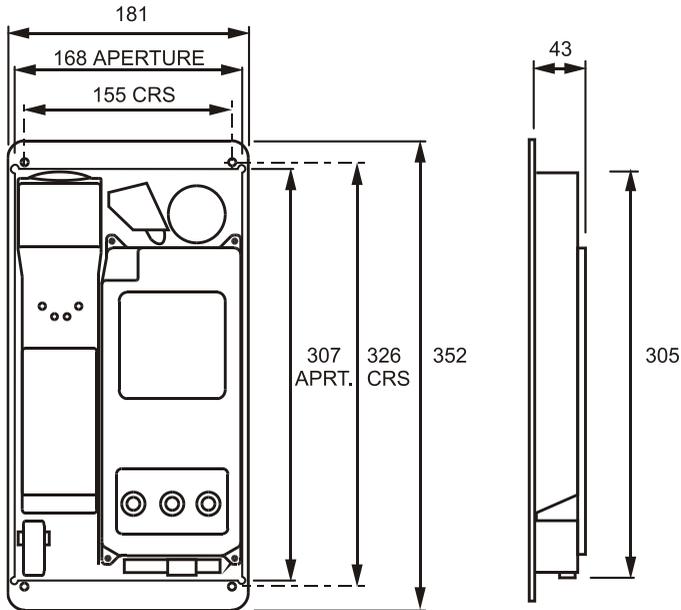
Banding straps (large scale worm-drive clamps) are not included in this kit and must be obtained separately. For details of where banding can be obtained, refer to GAI-Tronics.

1. Using a suitable tool, punch out the 4 **outer** holes in the rear enclosure, taking care not to damage or dislodge the plastic bushes.
2. Attach the pole mounting clamp assemblies to the rear enclosure using the M6 x 25 screws provided, pushing the screws through from inside the phone.
3. Tighten nuts to a torque of 4.5Nm (3.3lb-ft) max.
IMPORTANT: avoid the use of power tools. Spinning the nuts too quickly can cause a rapid increase in heat which can cause the nuts to seize as a result of galling or cold-welding.
Note: only use the outer four holes, and ensure that the screws seat properly in the plastic bushes to avoid water ingress.
4. Ensuring that the glands are at the bottom, pass a proprietary banding strap round each of the pole mounting clamps and the support pole. Tighten securely.
5. Continue the installation by making the appropriate connections (section 5.5) and re-fitting the face plate.
6. Re-tighten the straps firmly and trim off any excess band material. For security the driving head of the band may also be sawn off.

4.2.3 Flush mounting

Titan telephones supplied for flush mounting have a slightly different faceplate to those supplied with a rear enclosure – in particular the fixing holes are in different positions and there are no corner cut-outs (for door hinges). These models are usually described as “TitanIPF-...” and are supplied without glands.

Note that it is the installer’s responsibility to prevent moisture coming into contact with the electronics and connections on the back of the faceplate.

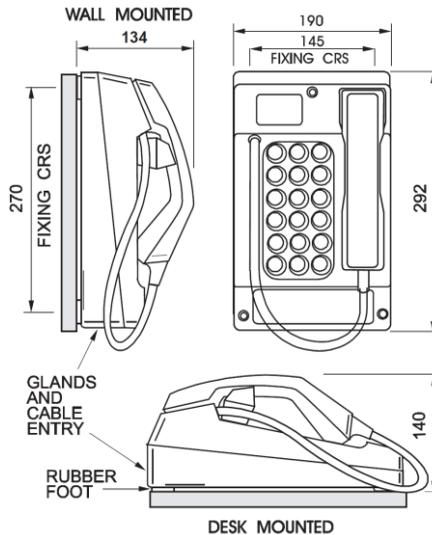


To flush-mount the telephone to a wall:

1. Prepare a recess (at least 50mm, 2in deep) in the wall according to the dimensions shown.
2. Mark the wall with hole centres based on the dimensions shown (155 x 326mm, 6.1 x 12.84in). If necessary offer the faceplate up to the wall to check alignment. Do not use the telephone as a template for drilling.
3. Drill holes in the wall at the marked positions. Select appropriate screws, wall plugs etc., for the type of wall, bearing in mind that the weight of the complete phone is around 1.5kg.
4. Route the cable to within the recess, and make connections to the telephone as shown in section 5.5.

5. Secure the telephone to the wall taking care not to trap any wires. The gasket on the rear of the faceplate is intended to make a weather seal when compressed against a smooth surface. Do not rely on this gasket to keep water out if mounting directly to rough surfaces such as brickwork – in these cases use additional sealant around the edges to ensure a weatherproof seal.

4.3. Commander



4.3.1 Wall mounting

To ensure weatherproof integrity when wall mounted, external cables should enter the enclosure from the bottom via the 20mm gland entries provided.

IMPORTANT:

Do not drill any extra holes as this will invalidate your warranty and could result in an unsafe condition.

1. Remove rubber feet from the Rear Casing if fitted. Ensuring that the cable entries are at the bottom offer the Rear Casing up to the vertical surface and mark through the fixing holes. Do not use the Rear Casing as a template to drill the holes. Work only from the marked positions.
2. Drill the holes in the vertical surface to suit the best method of fixing.
3. Ensure the Rear Casing is securely attached to the vertical surface using the four 7mm diameter screw holes provided. No sealing washers are necessary.

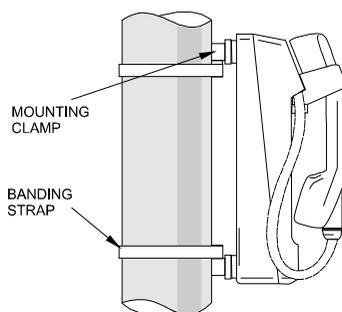
IMPORTANT: *Do not use countersunk headed fixing screws. Only use round head, socket cap head or pan head screws. Take care not to over tighten the screws, doing so may damage the case, could result in an unsafe condition and will invalidate your warranty.*

4. Continue the installation by making the appropriate connections (section 5.7).
5. Reconnect the ringer. Secure the telephone Front Casing to the Rear Casing.

4.3.2 Pole mounting

Kit No 100-02-0208-001

This accessory is for mounting GAI-Tronics telephones on to the side of round poles of 100mm to 200mm (4 – 8in) diameter, or on to square or rectangular section uprights of 100mm to 150mm (4 – 6in) across the mounting surface. For flat mounting on surfaces greater than 150mm (6in) across use the desk or wall mounted methods as appropriate.



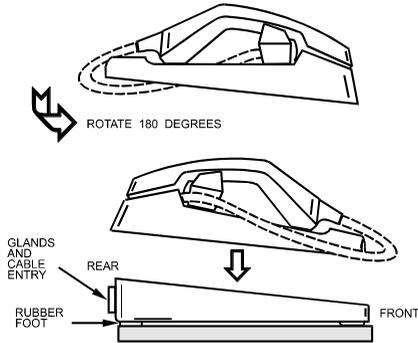
NOTE:

Banding straps (large scale worm-drive clamps) are not included in this kit and must be obtained separately. For details of where banding can be obtained, refer to GAI-Tronics.

1. Remove rubber feet from the Rear Casing if fitted. Attach the pole mounting clamp assemblies to the Rear Casing using the M6 x 25 screws provided.
2. Ensuring that the glands are at the bottom, pass a proprietary banding strap round each of the pole mounting clamps and the support pole. Tighten to a torque of 4.5Nm (3.3lb-ft) max.
IMPORTANT: avoid the use of power tools. Spinning the nuts too quickly can cause a rapid increase in heat which can cause the nuts to seize as a result of galling or cold-welding.
3. Continue the installation by making the appropriate connections (section 5.7).
4. Reconnect the ringer. Secure the telephone Front Casing to the Rear Casing.
5. Re-tighten the straps firmly and trim off any excess band material. For security the driving head of the band may also be sawn off.

4.3.3 Desk mounting / Rake

For horizontal surfaces greater than 150 x 280mm (6 x 11in) use the free-standing desk mounted method below.

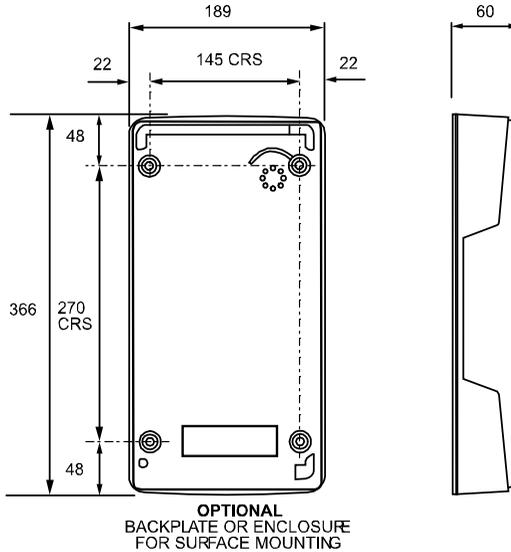


To provide a 'rake' for convenient operation, the Front Casing may be turned through 180° before it is fitted to the Rear Casing. Thus the cable entries are at the rear of the telephone.

1. Ensure that the supplied rubber feet are fitted to the underside of the Rear Casing.
2. Rotate the Front Casing through 180° taking care not to trap any wires.
3. Continue the installation by making the appropriate connections (section 5.7).
4. Reconnect the ringer. Secure the telephone Front Casing to the Rear Casing.

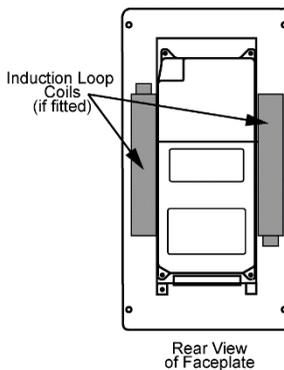
4.4. Help Point

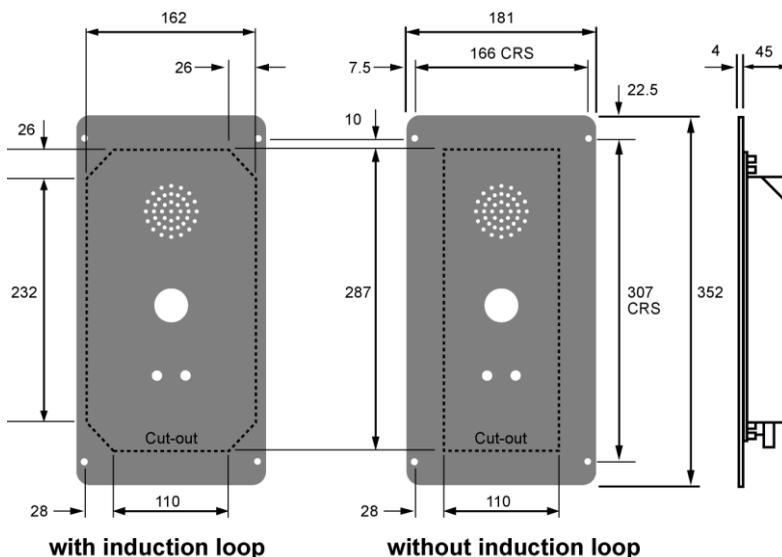
4.4.1 Wall/Pole Mounting



When wall or pole mounted, Help Point units must be fitted inside a dedicated rear enclosure. The rear enclosure is identical to the Titan enclosure (although usually without a door). Follow the Titan mounting information given in sections 4.2.1 (wall mounting) or 4.2.2 (pole mounting).

4.4.2 Flush mounting





Note that it is the installer's responsibility to prevent moisture coming into contact with the electronics and connections on the back of the faceplate.

To flush-mount the telephone to a wall:

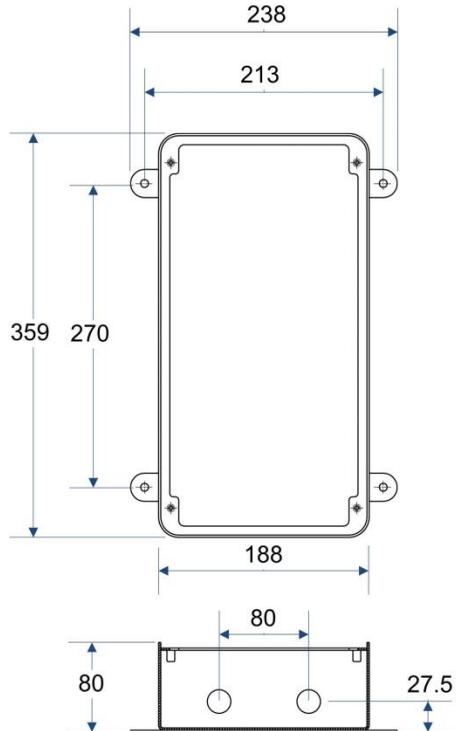
1. Prepare a recess (at least 50mm, 2in deep) in the wall according to the cut-out dimensions shown. The recess must be clear of cables, glands, conduit etc.
2. Mark the wall with hole centres based on the dimensions shown (166 x 307mm, 6.5 x 12.1in). If necessary offer the faceplate up to the wall to check alignment. Do not use the telephone as a template for drilling.
3. Drill holes in the wall at the marked positions. Select appropriate screws, wall plugs etc., for the type of wall, bearing in mind that the weight of the complete phone is around 1.5kg (3.3lbs).
4. Route the cable to within the recess, and make connections to the telephone as shown in section 5.5.

Secure the telephone to the wall taking care not to trap any wires. Note that the gasket on the rear of the faceplate is intended to make a weather seal when compressed against a smooth surface. Do not rely on this gasket to keep water out if mounting directly to rough surfaces such as brickwork – in these cases use additional sealant around the edges to ensure a weatherproof seal.

4.5. Sentinel

4.5.1 Surface Mounting

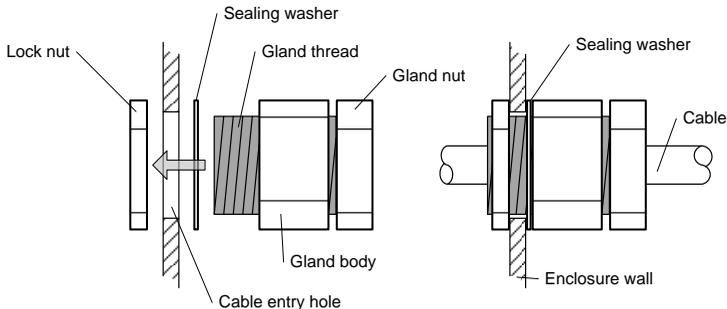
The Sentinel VoIP telephone can be surface mounted to a wall in a dedicated stainless steel rear enclosure (available separately).



Connections to the network, power source and external inputs/outputs are via cables which must be supplied and fitted by the installer. Two 20mm entry holes are provided in the lower face. 2 IP66 glands and an IP66 blanking plug are provided, allowing either 2 glands or 1 gland and a blanking plug to be used. If only one gland is used, the other hole must be sealed using the blanking plug.

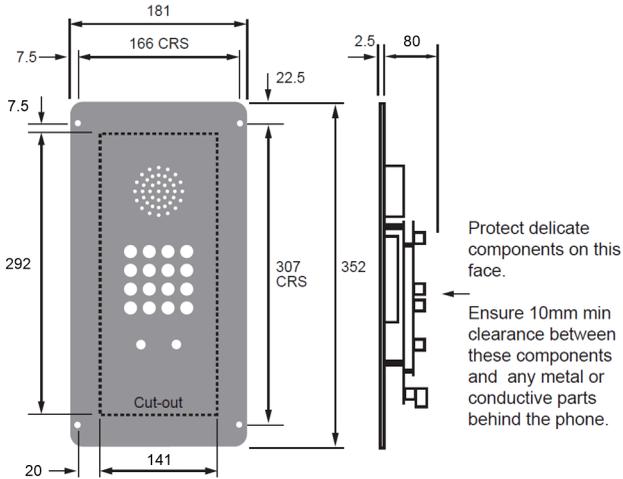
Mounting method

1. Secure the rear enclosure to the wall by means of suitable fixings using the 4 x $\varnothing 7$ mm holes provided, fixing centres 213 x 270mm as shown above.
2. Feed cables through glands as appropriate:
 - a. Note that 2 plastic glands are supplied with the rear enclosure, but it is the installer's responsibility to select the correct type of gland for the application and cables used. The gland entries (and the supplied glands) are M20.
 - b. One gland is always used for the Ethernet cable. Depending on the RJ45 plug used, it may be necessary to feed the cable through the gland first, then crimp the connector on inside the enclosure.
 - c. If a second cable is required, for example to provide dc power where PoE is not used, or to connect external inputs or outputs, this should be routed through a second gland.
 - d. If a second gland is not used, the second cable entry must be sealed using the blanking plug provided..
3. For reference, glands (and blanking plugs) are fitted as shown below:



4. Ensure that the sealing gland sealing washer is correctly fitted as shown.
5. Make the appropriate connections to the internal PCBs as shown in section 5.11.
6. Ensure all glands (and blanking plug) are tightened to provide a waterproof seal.
7. Fit the faceplate to the rear enclosure. Secure in place with 4 x M5x16 screws supplied.

4.5.2 Flush mounting



Note that it is the installer's responsibility to prevent moisture coming into contact with the electronics and connections on the back of the faceplate.

To flush-mount the telephone to a wall:

5. Prepare a recess (at least 80mm, 3.2in deep) in the wall according to the cut-out dimensions shown. The recess must be clear of cables, glands, conduit etc.
6. Mark the wall with hole centres based on the dimensions shown (166 x 307mm, 6.5 x 12.1in). If necessary offer the faceplate up to the wall to check alignment. Do not use the telephone as a template for drilling.
7. Drill holes in the wall at the marked positions. Select appropriate screws, wall plugs etc., for the type of wall, bearing in mind that the weight of the complete phone is around 2kg (4.4lbs).
8. Route the cable to within the recess, and make connections to the telephone as shown in section 5.11.

Secure the telephone to the wall taking care not to trap any wires. Note that the gasket on the rear of the faceplate is intended to make a weather seal when compressed against a smooth surface. Do not rely on this gasket to keep water out if mounting directly to rough surfaces such as brickwork – in these cases use additional sealant around the edges to ensure a weatherproof seal.

5. Connections and Installation

5.1. General

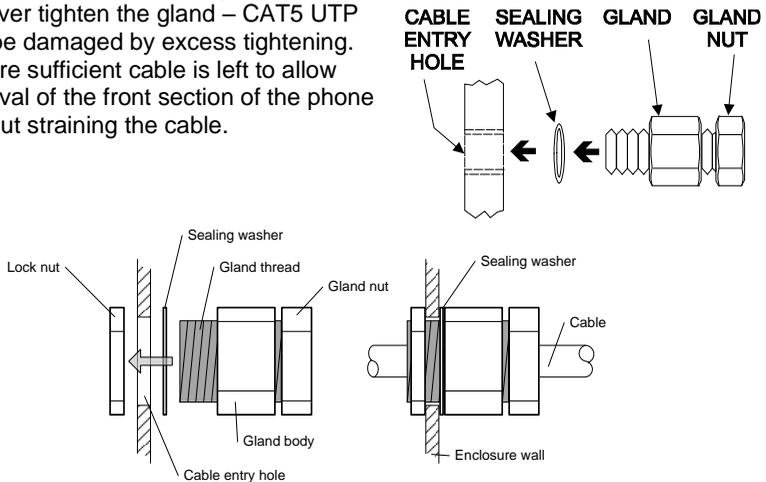
IMPORTANT

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 telephone whilst unpacking, preparing and installing the telephone in inclement weather conditions or by negligence.

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

Insert each cable through its gland body and tighten the gland nut sufficiently to clamp the cable, making a seal. Do not over tighten the gland – CAT5 UTP can be damaged by excess tightening. Ensure sufficient cable is left to allow removal of the front section of the phone without straining the cable.



IMPORTANT: If only one gland entry is used, the blanking plug fitted to the second gland position must be left in place.

IMPORTANT

Installation details differ between the product ranges –please make sure you know which product you are installing and refer to the appropriate sections below.

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.

These products are Class II Equipment, meaning that they are designed with double insulation to protect against electric shock hazards. 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 mm² (19awg) for flexible cords, or 1mm² (18awg) 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.

Extra precautions must be taken for flush-mounted Titan and Help Point products (where a GAI-Tronics rear enclosure is not used). In this case it is the installer's responsibility to ensure that the installation is safe, that there is no possibility of any contact being made to live terminals, that cables are properly restrained to prevent them becoming detached, and that there is no possibility of water, dust or other fluids coming into contact with the rear of the product.

Always ensure that sufficient clearance is maintained between hazardous voltages and any accessible conductive parts.

If in doubt always use a GAI-Tronics rear enclosure, installed according to these instructions.

5.3. Emergency Services warning

If, as configured, the telephone cannot make a direct call to the emergency services, check with your network administrator whether it is necessary to warn users, and if so provide a suitable warning notice. A

warning label, which can be fixed to the front of the telephone, is provided.

5.4. Titan Installation

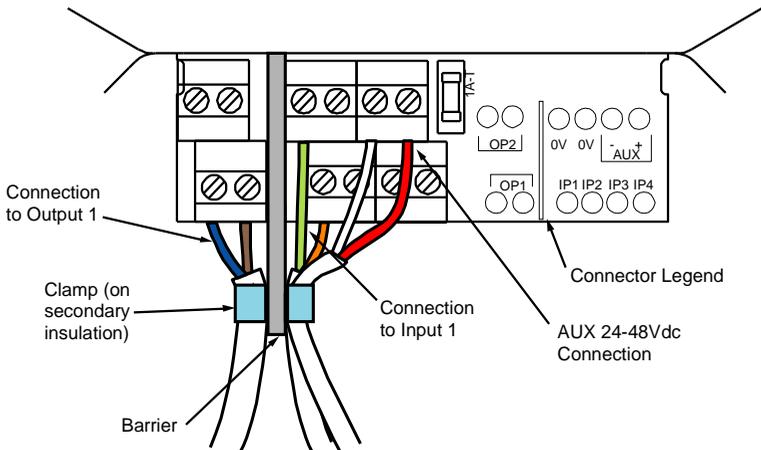
1. To prepare for installation, open the door (where fitted), then undo the four retaining screws to remove the faceplate from the rear enclosure. A 3mm Allen key is required.

Caution – take care to support the spring-loaded door whilst open to prevent it slamming shut and trapping fingers.

2. The Titan telephone is intended for vertical installation to a wall or pole. Select the required mounting method (section 4.2) and mount the rear enclosure first where applicable.
3. Route the required cables through glands as appropriate, and make connections following section 5.5. When fitting mains wiring to this product that is not wholly run within trunking, it is important that the strain relief is correctly installed and tested to ensure there will be no disturbance to the wire terminations. As a minimum the cable must withstand a pull of 100N (approx 10kg force or 22.5lbf) without visible movement. If conduit is used, mains cables must be secured elsewhere.
4. Re-fit the faceplate ensuring a weatherproof seal
5. Test the operation of the telephone. Installation is now complete.

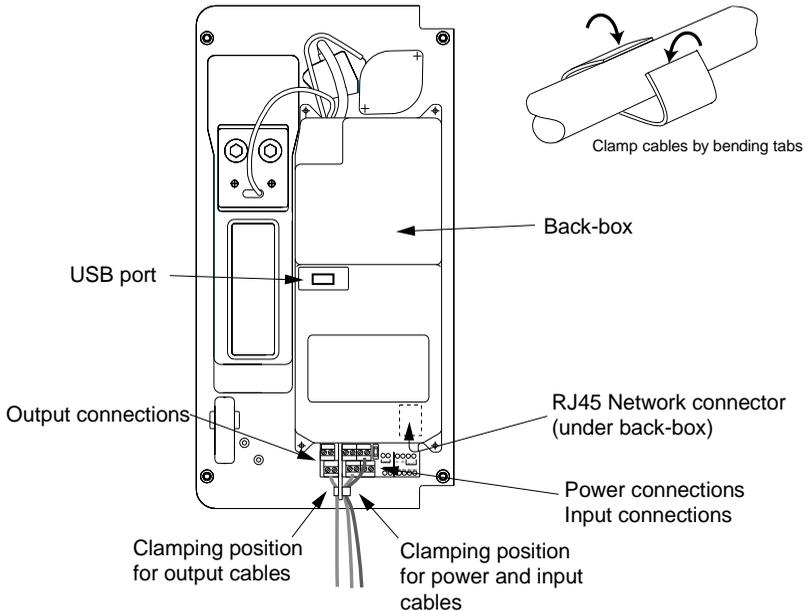
5.5. Titan Connections

Make the appropriate connections as shown on the diagrams below.



Cabling example showing connections to Input 1, Output 1 and aux. DC supply

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



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

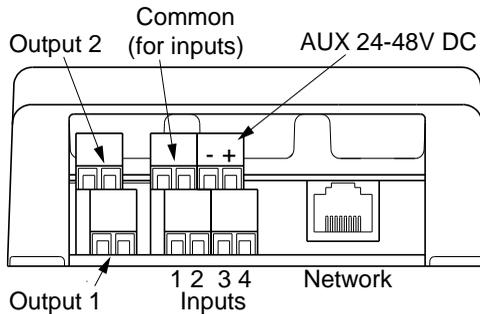
Output 2 - 3A at 250Vac, 1A at 24Vdc

(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. This will not cause the telephone to malfunction, but it may result in this area becoming hot especially in high ambient temperatures. Avoid operating Output 1 at high currents in high temperatures. 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)

External power supply - 24-48Vdc, 200mA

Control inputs - for connection to voltage free contacts only. Internal pull-up resistor source current = 300uA. These inputs form part of an ES1 circuit and

precautions must be taken to prevent hazardous voltages being applied to these circuits



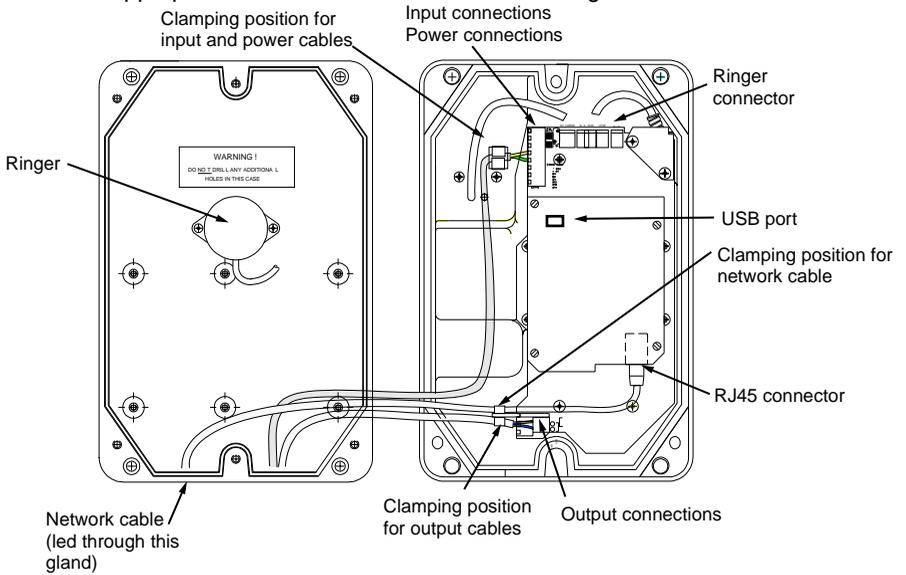
End view of Connectors

5.6. Commander Installation

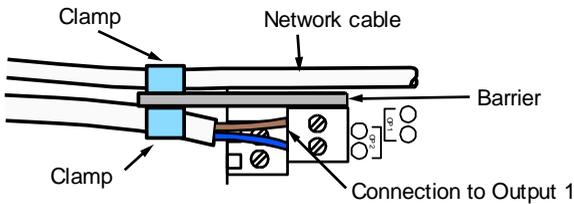
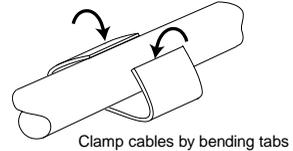
1. To prepare for installation, undo the three retaining screws shown to remove the front casing from the rear. The screws are captive in the front casing; a 5mm Allen key is required. Disconnect the ringer connector from the circuit board, noting the position and orientation.
2. The Commander telephone can be installed vertically to a wall or pole, or used horizontally on a desk. Select the required mounting method (section 4.3) and mount the rear casing first where applicable.
3. Route the required cables through glands as appropriate, and make connections following section 5.7. When fitting mains wiring to this product that is not wholly run within trunking, it is important that the strain relief is correctly installed and tested to ensure there will be no disturbance to the wire terminations. As a minimum the cable must withstand a pull of 60N (approx 6kg force or 13.5lbf) without visible movement. If conduit is used, mains cables must be secured elsewhere.
4. Reconnect the ringer. Re-secure the telephone Front Casing to the Rear Casing with the three retaining screws, ensuring a weatherproof seal.
5. Test the operation of the telephone. Installation is now complete.

5.7. Commander Connections

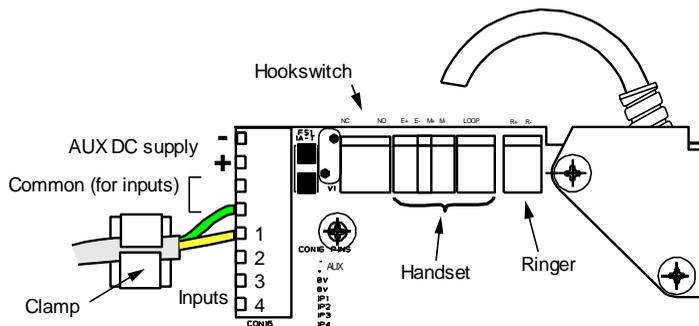
Make the appropriate connections as shown on the diagrams below.



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



Cabling example showing connection to Output 1



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 - rating 2A 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. This will not cause the telephone to malfunction, but it may result in this area becoming hot especially in high ambient temperatures. Avoid operating Output 1 at high currents in high temperatures. 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 2A)

External power supply - 24-48Vdc, 200mA

Control inputs - for connection to voltage free contacts only. Internal pull-up resistor source current = 300uA. These inputs form part of an ES1 circuit and precautions must be taken to prevent hazardous voltages being applied to these circuits

5.8. Help Point Installation

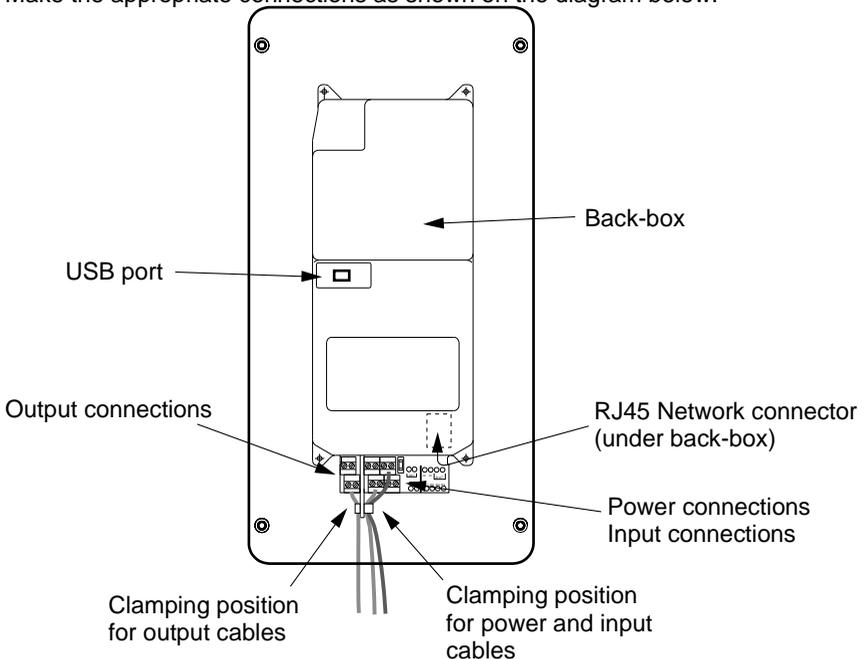
1. To prepare for installation, remove the faceplate from the rear enclosure (if supplied) by undoing the four retaining screws. A 3mm Allen key is required.
2. Help Point telephones are intended for vertical installation to a wall or pole or flush-mounted into a vertical surface. Select the required

mounting method (section 4.4) and mount the rear enclosure first where applicable.

3. Route the required cables through glands as appropriate, and make connections following section 5.9. When fitting mains wiring to this product that is not wholly run within trunking, it is important that the strain relief is correctly installed and tested to ensure there will be no disturbance to the wire terminations. As a minimum the cable must withstand a pull of 60N (approx 6kg force or 13.5lbf) without visible movement. If conduit is used, mains cables must be secured elsewhere.
4. Re-fit the faceplate ensuring a weatherproof seal
IMPORTANT: avoid the use of power tools. Spinning the fixing screws too quickly can cause a rapid increase in heat which can cause them to seize as a result of galling or cold-welding.
5. Test the operation of the telephone. Installation is now complete.

5.9. Help Point Connections

Make the appropriate connections as shown on the diagram below.



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

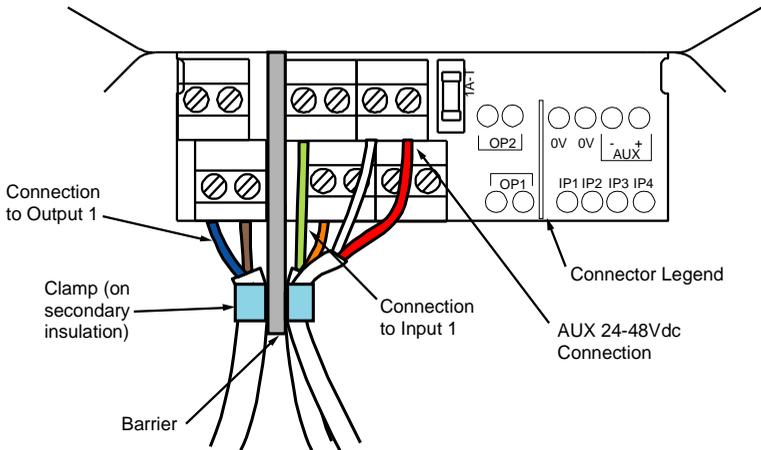
Connection details for Help Points are identical to **Titan**, please refer to section 5.5 above. Note: if powering from 24Vdc, the power supply must be capable of delivering 400mA.

5.10. Sentinel Installation

1. The Sentinel telephone is intended for vertical installation to a wall. Select the required mounting method (section 4.5) and mount the rear enclosure first where applicable.
2. Route the required cables through glands as appropriate, and make connections following section 5.11.
3. Re-fit the faceplate ensuring a weatherproof seal
4. Test the operation of the telephone. Installation is now complete.

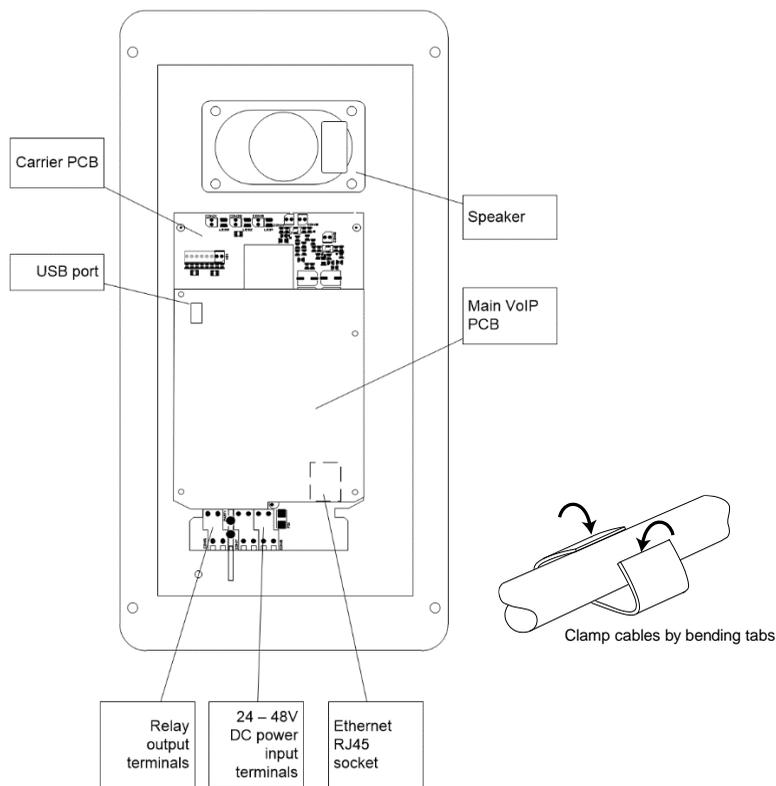
5.11. Sentinel Connections

Make the appropriate connections as shown on the diagrams below.



Cabling example showing connections to Input 1, Output 1 and aux. DC supply

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



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, but note that hazardous voltages (>48V) must NOT be connected to either of the control outputs:

If used, the circuits that the relay contacts are connected to must be ES1 as defined in EN 62368-1 and must not exceed the ratings shown below

Output 1 - rating 2A at 42.4Vpk ac / 2A at 30Vdc

Output 2 - rating 3A at 42.4Vpk ac / 1A at 24Vdc.

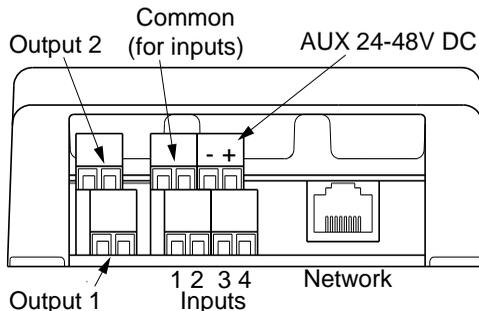
(Note: for Output 1, a continuous current of 2A will cause a 22°C temperature rise to the PCB area close to the terminals after 10mins. This will not cause the telephone to malfunction, but it may result in this area becoming hot especially in high ambient temperatures. Avoid operating Output 1 at high currents in high temperatures. 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)

Any 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.

External power supply - 24-48Vdc, 200mA @48Vdc, 400mA @ 24Vdc

Control inputs - for connection to voltage free contacts only. Internal pull-up resistor source current = 300uA. These inputs form part of an ES1 circuit and precautions must be taken to prevent hazardous voltages being applied to these circuits



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. Technical Specifications

Product features	
Power supply	Power-over-Ethernet, 802.3af compliant (Class 0) via RJ45, both method A and method B, or External power supply: 24-48Vdc, 200mA, except Help Point or Sentinel models being powered from 24Vdc, which require 400mA. Maximum voltage range: 22-50V
Hookswitch	Electronic with no external moving parts
Ringer loudness	80dBA @ 1m
Handset (Titan & Commander)	Suitable for inductive coupling to Hearing Aids having a 'T' switch position. Tested to ETS 300-381
	
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 – (Titan, Commander and Help Point) 2A* at 250Vac, 2A* at 30Vdc Output 1 (Sentinel) - 2A* at 42.4Vpk ac, 2A* at 30Vdc Output 2 (Titan and Help Point) - 3A at 250Vac, 1A at 24Vdc Output 2 (Commander) - 2A* at 250Vac, 1A at 24Vdc Output 2 (Sentinel) - 3A at 42.4Vpk ac, 1A at 24Vdc REFER TO SAFETY INFORMATION IN SECTION 5.2 <i>(*Note: for these outputs, 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.</i> <i>Output 2 on Titan, Help Point and Sentinel models will not give any significant temperature rise up to its rated current)</i>

Product features	
Codecs & Audio	G.711 A-Law G.711 μ -Law G.729 Codec preference sequence Configurable ring and call progress tones (to emulate national tones)
Configuration	Embedded web server Configuration file download SNTP with timezone and daylight saving Automatic updating via TFTP Password protection
Monitoring and Reporting	SNMPv2 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: -40°C to +60°C (-40°F to 140°F) Storage: -40°C to +70°C (-40°F to 158°F)
Relative Humidity	Up to 95% (non-condensing)
Ingress Protection	To EN60529:1992 – Degrees of protection provided by enclosures: Titan with door closed IP66 Commander with curly handset cord IP66 All other models IP65
Physical characteristics	
Casing material	Aluminium (Titan and Help Point) Glass reinforced polyester (Commander)
Handset Material	Cycloy (2800) with stainless steel or polyester curled cord.
Weight	3 –5kg (2.2 – 11lbs) depending on option.
Dimensions	Dependant on model and variant. See 4.2 (Titan), 4.3 (Commander), 4.4 (Help Point) or 4.5 (Sentinel).

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

European Directives	<p>2014/30/EU – EMC Directive</p> <p>2014/35/EU – Low Voltage Directive (LVD)</p> <p>2011/65/EC - Restriction of the use of certain hazardous substances in electrical and electronic equipment (recast) (RoHS 2) Directive</p>	
	<p>2012/19/EU - Waste Electrical and Electronic Equipment (WEEE) Directive</p>	

<p>Recycling Information</p>	<p>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.</p> <p>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.</p> <p>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.</p>	
------------------------------	---	--

9. 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>

GAI-TRONICS

A division of Hubbell Ltd.

Brunel Drive, Stretton Park
 Burton on Trent, DE13 0BZ
 England

Tel: 01283 500500, Fax: 01283 500400

<https://www.hubbell.com/gai-tronics/en/>

The policy of GAI-Tronics is one of continuous improvement, therefore the Company reserves the right to change specifications without notice