X-Series

Xsms Module

Africa's leading manufacturer and distributor of electronic security products.

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Introduction to the IDS X-Series SMS Unit

Thank you for purchasing an IDS SMS unit.

The IDS X-Series SMS unit connects directly to the X-Series alarm panel via a serial cable that is supplied with the SMS unit.

The SMS unit integrates seamlessly with the X-Series alarm panels to give you great functionality and an easy to use command set.

The SMS unit takes advantage of the zone naming ability of the X-Series alarm panel by sending the zone names via SMS for you to know exactly what has been triggered. To make the SMS module even more name friendly partitions can be named and the names used within SMSes, which is not available via the keypad. When sending SMS via your cell phone, zone and partition names will be used to communicate back to you.
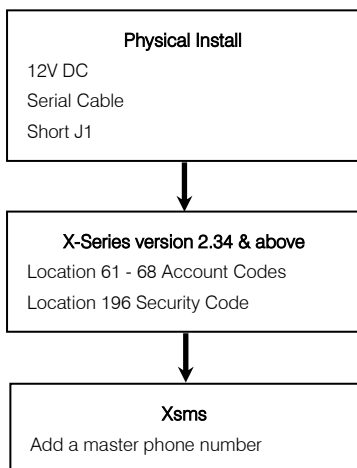
NOTE:
X-SERIES products are not compatible with any previous IDS products, such as theIDS805, IDS805s, IDS816 and IDS1632.

Features of the IDS Xsms Module

- Serial connection to the X-Series alarm panel
- Bi-directional communication for confirmation or rejection of messages
- 16 cell phone numbers
- 3 phone number levels: "Master", "Arming" and "Reporting only"
- Easy to use text commands
- Additional security with alarm user codes required
- SMS unit can be set to update the time on the X-Series panel. (Recommended)
- Zone names created on the X-Series will automatically update the SMS module with the zone names

Quick Installation Overview

```
┌─────────────────────────────────────┐
│           Physical Install           │
│  12V DC                              │
│  Serial Cable                        │
│  Short J1                            │
└─────────────────────────────────────┘
                  │
                  ▼
┌─────────────────────────────────────┐
│     X-Series version 2.34 & above    │
│  Location 61 - 68 Account Codes      │
│  Location 196 Security Code          │
└─────────────────────────────────────┘
                  │
                  ▼
┌─────────────────────────────────────┐
│               Xsms                   │
│   Add a master phone number          │
└─────────────────────────────────────┘
```

Installation and Wiring

The module can be installed into the IDS X-Series metal box. The supplied serial cable connects the unit to the serial connector on the X-Series alarm panel and the red and black 12V cables connect to either the Tx or 12V auxiliary connectors on the alarm panel.

NOTE:
Do not exceed the recommended 750mA current limit of the X-Series power supply.

Installation

- Fix the SMS unit to the alarm box via the standoffs supplied.
- Short jumper J1 on the alarm panel with the jumper supplied. (Remove jumper when connecting serially via IDSwift 2). Please see Figure 2: X-Series J1 on page 11
- Connect the serial cable to the serial port of the SMS unit and the X-Series alarm panel, as shown in Figure 3 on page 11
- Connect the 12V power cables to the auxiliary 12V connector on the alarm panel or the Tx output.
- Programme a six digit security code, any six digit code, into the security code location 196.(SMS & panel must be connected via serial cable with J1 shorted when entering the security code)
- Enter an account code into location 61 to 68 depending on the partition that will be communicating via SMS. (If the alarm system is not reporting to a control room then any account code can be entered)

NOTE:
Do not exceed the recommended 750mA current limit when connecting peripheral devices to the X-Series.

X-Series programming

When connecting the SMS unit to an X-Series alarm panel two options must be programmed in the alarm panel using the Installer programming mode, before any communication will take place.

NOTE:

For the Xsms to function correctly the X-Series firmware must be 2.34 & above and contact a professional installer to do the following:
The SMS module must be connected via the serial port Figure 3: Serial Connection, to the alarm panel and J1 must be bridged out, see Figure 2: X-Series J1.

Account Code

Location 61 to 68: For each partition to report an account code must be entered into location 61 to 68, depending on the partition. I.e. If partition 1 and 2 need to report add a four digit number to location 61 for partition 1 and location 62 for partition 2.

Security Code

Location 196: The security code marries the alarm panel to the SMS communicator. This code must be entered and is any six digit number.

NOTE:
When entering the six digit security code into location 196 the SMS module must be connected to X-Series alarm panel.

Messages

The SMS module has two capabilities – Reporting to cell phones and control via cell phones.

Reporting – The SMS module sends alarm 'verification' reports in human readable messages. Events being reported can be customised by each phone number.

Control – SMS messages can be sent to execute different functions on the alarm.

Each message sent to the unit must adhere to a specific format:

[code] *space* **[command]** *space* **[extended command]** *space* **[data]**

Code – Valid alarm user code stored in the alarm panel

Command – A string that identifies the function that you are wanting to access in the alarm panel.

Extended Command – Any supplementary information the function requires. (Not always required will depend on the function you are accessing)

Data - Any extra information the extended command requires.

This will be discussed further in the Command Set section on page Command Set on page 6.

Only a single command can be sent per SMS, but multiple data values may be sent separated by a comma.

Messages are limited to 160 characters.

Messages will be rejected:

- If any part of the message is invalid
- When the user code sent is unknown by the alarm panel
- If any part of the command fails to execute
- If the message is sent from an unknown phone number
- If the command is sent by a phone number that does not have the required permission

Phone Numbers and User Codes

There are three groups of user phone numbers. Entering phone numbers into the SMS unit is done via SMS's from a "Master Phone Number".

In the default state any cell phone can be used to enter the first "Master Phone Number", once entered the phone with that cell number must be used to enter more cell numbers or control the system.

Master Phone Number

Master phone numbers have the highest level of access to the SMS Module. Master phone numbers are allowed access to all configuration data. Only master numbers are permitted to add phone numbers to the system and allocate which partitions will report to each phone number.

Arming phone Numbers

Arming phone numbers are the second level of phone numbers. These phone numbers are permitted user rights to be able to control the Alarm Panel and receive reports.

Reporting Phone Numbers

Reporting phone numbers are at the lowest level, and access to the SMS Module is restricted to only receiving reports. The only further functionality that a reporting phone number is granted is the ability to temporarily turn off reporting to that number.

SMS Processing

The SMS module works on the basis of phone numbers, with each phone number being a user on the SMS module. The SMS modules users, Cell numbers, are no way linked to users on the alarm panel. The SMS module will only accept commands from known phone numbers and will reject commands from unknown numbers or numbers not authorised for the command sent.

Any allowed messages are passed to the panel. The panel elects to execute the command based on the following:

- Validity of the user code within the alarm
- The properties of the user code within the alarm
- The current status of the panel

Therefore, for a person to send a successful command, the following conditions must be met:

- The phone number must be programmed into the SMS
- The phone number must be allocated to a group that allows the specified command
- The user code must be programmed into the panel
- The user code properties must be enabled for the specified command
- The action must be possible in the current panel status
- The command string must be correct and with all the required information

Status LEDs

See Figure 1: SMS Module PCB

GSM Connect Status

LED flashes once per second if not connected and once every three seconds when connected to the Cell network and the signal strength is good enough to communicate.

Heart Beat

LED Flashes when the unit is running and the power up sequence has completed.

Network Status

LED Flashes when connected to the Cell provider's network and accepted by the service provider. I.E. Sim card is activated

Network Comms

LED on when communicating with the Cell network

Panel Comms

LED on when communicating with the X-Series alarm panel

Module Defaulting

To default the IDS SMS module:

1. Power the unit down
2. Press and hold the default button down
3. Power up the unit
4. Keep holding down the default button, (about 15 seconds), until the 'GSM Status LED' comes on. (Figure 1: SMS Module PCB)

Command Set

There are fourteen command sets that can be used to configure or communicate with the SMS module. Each command is not case sensitive

Add

The "Add" command is sent to add a new authorised phone number to the SMS Module. You must specify whether the new phone number is a Master Phone Number or a User Phone Number.

Desired Action	Code	Command	Ext. Command	Data
Add phone number as a Master number	1234	Add	Master	Phone Number
Add phone number as an Arm number	1234	Add	Arming	Phone Number
Add phone number as a Reporting number	1234	Add	Reporting	Phone Number
Set the to retrieve the time from the Cell network and update the panel	1234	Add	Time	Phone Number

NOTE:
The above commands can only be sent via master phone number.
Add Time is sent once from a master phone. The unit will send a SMS once every week to retrieve the cell network's time to update the alarm panel time.

Feedback sent to your phone number:
- Confirmation if adding the phone number was successful.
- Addition failed if unsuccessful.

Delete

When needing to delete a phone number.

Desired Action	Code	Command	Ext. Command	Data
Deleting a phone number	1234	Delete		Phone Number

NOTE:
This is only a master phone number command.

Feedback sent to your phone:
- Confirmation of the phone number being deleted.
- Deletion failed if unsuccessful.

Event Log

The "Event" command is sent to retrieve a certain number of events from the Alarm event log.

Desired Action	Code	Command	Ext. Command	Data
Retrieving 5 Events	1234	Event	Panel	5

NOTE:
This command could return a number of SMSes as SMSes are restricted to 160 characters

Feedback sent to your phone number:
- The last 5 events are returned. (The reply may span multiple messages)

- Failed message if unsuccessful.

Reporting

The "report" command is sent to select what reports you want to receive on that phone number.

Only "Master Phone numbers" can allocate partitions to a phone number.

Valid Master User Extended Commands:

On – Enables partition reporting to the phone number specified in the SMS

P1,P2…P8 – Partition that will report to the phone number.

Global – All enabled X-Series events that are not partition related are reported

Valid User Extended Commands:

Threshold – Sets the number of SMSes sent per day by the module to the phone

Off – Disables partition reporting to that phone that sent the SMS

Type – Sets the type of feedback the phone will receive

Types of feedback:

Full – All enabled events are reported

Reduced – Only the following will be reported: Arm/Disarm, Zone violations, Panics, AC Fail/Restore and Battery Low/Restore

Raw/English – Contact ID string / readable format

Desired Action	Code	Command	Ext. Command	Data
Turn on global reporting for P1 & P2	1234	Report	On P1,P2,global	Phone Number

Default: On (Enables reduced reporting)

Feedback sent to your phone number:
- Confirmation that the reports for partition1 and 2 have been turned on
- Failed message if unsuccessful.

NOTE:
When adding partitions include all previous partitions the number may have had

The below SMS is sent from the phone requiring the reporting to be switched off

Desired Action	Code	Command	Ext. Command	Data
Turn off reporting for P1 & P2	1234	Report	Off P1,P2	

Feedback sent to your phone number:
- Confirmation that the reports for partition1 and 2 have been turned off
- Failed message if unsuccessful

Sent from phone number wanting to change the reporting information received

Desired Action	Code	Command	Ext. Command	Data
Set the type of reporting to Full	1234	Report	Type	Full

Default: Reduced

Feedback sent to your phone number:

- Confirmation that the reporting Type is set to full.
- Failed message if unsuccessful.

NOTE:
The below SMS is sent from the phone requiring the change

Change the number of SMSes sent to your phone

Desired Action	Code	Command	Ext. Command	Data
Set the reporting threshold to 5	1234	Report	Threshold	5

Default: 20 (20 SMS sent to each phone per day)

Feedback sent to your phone number:

- Confirmation that the daily reporting threshold has been set to 5
- Failed message if unsuccessful.

Site Name

Site names are used to identify individual SMS Modules. Access to the site name command is restricted to Master Phone Numbers. Site names will always be sent with all SMSes and by default is "IDS SMS". Site names are limited to 12 characters.

Desired Action	Code	Command	Ext. Command	Data
Assigning a site name	1234	Site	Name	Home

Feedback sent to your phone number:

- Confirmation that the site name has been changed to Home.
- Failed message if unsuccessful

NOTE:
Any spaces before or after the name will be part of the name. Names are case sensitive
The X-Series alarm system does not use site names and cannot be added via the keypad.

Partition

Used to name partitions to make it easier to remember what each partition is. Partition names can be used with commands and will be used in feedback SMSes.

Desired Action	Code	Command	Ext. Command	Data
Name partition 1 "Main House"	1234	Partition	Name	1:Main House
Name partition 2 as "Granny Flat" & partition 3 as "Garage"	1234	Partition	Name	2:Granny Flat, 3:Garage

Feedback sent to your phone number:

- Confirmation that the partition(s) have been renamed
- Failed message if unsuccessful.

NOTE:
Any spaces before or after the name will be part of the name. Names are case sensitive
The X-Series alarm system does not use partition names and cannot be added via the keypad.

Arm

The "Arm" command is sent to arm partitions in the Alarm Panel. You must specify which partitions you want to arm within the data field.

You are limited to partitions to which the user code is assigned to on the panel.

Valid Extended Commands:

Status – Returns the arm status of partitions

S1 to S4 – This arms the system into the stay profile specified, S1 = stay profile 1, S2 = stay profile 2, etc.

Desired Action	Code	Command	Ext. Command	Data
Away arm all partitions	1234	Arm		All
Away arm P1 & P3	1234	Arm		P1, P3
Away arm "House"	1234	Arm		House
Away arm "House" & "Flat"	1234	Arm		House, Flat
Stay arm P2 in stay profile 3	1234	Arm	S3	P2
Stay arm "House" in stay profile 3	1234	Arm	S3	House
Stay arm P1 in stay profile 1 & P4 in stay profile 1	1234	Arm	S1	P1,P4
Stay arm House in stay profile 1 & Flat in stay profile 1	1234	Arm	S1	House, Flat

NOTE:
You can stay arm multiple partitions in a single SMS only if they all are armed in the same stay profile number.
Stay profiles can be changed by sending a new stay arm command with the new stay profile number.
If a partition is away armed and a stay arm command is sent the message will be rejected. Away armed partitions must be disarmed before being stay armed.

Desired Action	Code	Command	Ext. Command	Data
Retrieve the status of all partitions	1234	Arm	Status	All
Retrieve the status of P1	1234	Arm	Status	P1
Retrieve the status of P3 & P6	1234	Arm	Status	P3, S6

Feedback sent to your phone number:

- Confirmation of the status of the partition(s) queried
- Failed message if unsuccessful.

Disarming

The "Disarm" command will be sent to disarm partitions in the Alarm Panel. The partition to be disarmed must be specified within the data field.

Desired Action	Code	Command	Ext. Command	Data
Disarm all partitions	1234	Disarm		All
Disarm P2	1234	Disarm		P2
Disarm P5 & P6	1234	Disarm		P5, P6

Feedback sent to your phone number:

- Confirmation that the partition(s) have been disarmed
- Failed message if unsuccessful.

Bypass

The "Bypass" command will be sent to bypass specific zones. You must specify which zones to bypass in the data field. Zones may be referred to by their number or, where applicable, by their name.

Valid Extended Commands:

Status – Returns the bypassed status of the zone(s).

Desired Action	Code	Command	Ext. Command	Data
Bypass zone 1	1234	Bypass		1
Bypass zone 3,4,8,10	1234	Bypass		3,4,8,10
Bypass named zone "Passage"	1234	Bypass		Passage
Bypass named zone "Lounge" & "Kitchen"	1234	Bypass		Lounge, Kitchen
Retrieve status of zone 1	1234	Bypass	Status	1
Retrieve status of "Lounge"	1234	Bypass	Status	Lounge

Feedback sent to your phone number:

- The status of the zone(s) will be confirmed
- Failed message if unsuccessful.

Unbypass

The Unbypass command is sent when a zone is bypassed and you want to reactivate it.

Desired Action	Code	Command	Ext. Command	Data
Unbypass Zone 5	1234	Unbypass		5
Unbypass "Kitchen"	1234	Unbypass		Kitchen

Feedback sent to your phone number:

- Confirmation that the zone(s) have been unbypassed
- Failed message if unsuccessful.

NOTE:

Zones can only be bypassed if the alarm is unarmed

Zone

This command is used to name zones if they have not been named via the X-Series keypad.

Desired Action	Code	Command	Ext. Command	Data
Name zone 1 as "Kitchen"	1234	Zone	Name	1:Kitchen
Name zone 2 "Lounge" & zone 5 "Patio"	1234	Zone	Name	2:Lounge, 5:Patio
Check zone status on P1	1234	Zone	Status	P1

Feedback sent to your phone number:

- Confirmation that the zone(s) have been renamed
- Failed message if unsuccessful.

NOTE:

If a space is inserted before or after the name then the space becomes part of the zone name.
If a zone is named via SMS it will over write the zone name on the system.
Names are case sensitive

PGM

PGM command controls the programmable outputs on the X-Series alarm panel.

The PGM that is to be controlled must be specified in the data field and what action it must perform in the extended command field. PGMs may be named with this command as well. As such, PGMs may be referred to by their number or their name.

Valid Extended Commands:

On – Turns the PGM on by putting 12V DC onto the output

Off – Turns the PGM off by removing the 12V DC

PulseH – Pulse High puts 12V DC onto the output for 2 seconds

PulseL – Pulse Low will remove 12V DC from the output for 2 seconds if 12V is present

Status – Queries the state of the output

Name – Each output can be given a more meaningful name for easier control

Desired Action	Code	Command	Ext. Command	Data
Turn PGM 1 on	1234	PGM	On	1
Turn PGM 3, 4 & 5 off	1234	PGM	Off	3,4,5
Pulse PGM 2 Low	1234	PGM	PulseL	2
Pulse PGM 3 High	1234	PGM	PulseH	3
Name PGM 5 Lights	1234	PGM	Name	5:Lights
Get PGM 8s status	1234	PGM	Status	8

Feedback sent to your phone number:

- The status of the PGM will be confirmed
- Failed message if unsuccessful.

NOTE:

These commands will override the alarm pane's PGM status. The X-Series alarm system does not use programmable output names and cannot be added via the keypad.

Airtime

The "Airtime" command is used to query the current airtime balance of the SIM card in the module or to add airtime to the module. It is your responsibility to supply the network-dependant strings to manage the airtime on each card.

Desired Action	Code	Command	Ext. Command	Data
Save balance string in the SMS module	1234	Airtime	Command	Enter the string supplied
Query airtime balance	1234	Airtime	Balance	
Add airtime	1234	Network supplied string		

Feedback sent to your phone number:

- The network's answer returned back
- Failed message if unsuccessful.

Lockout

This is the "disabled" mode for the occasion that access to an authorised phone number has been lost due to theft or misplacement. To activate the lockout you must send the lockout command from a Master phone number. Once in this mode, the SMS Module will ignore all incoming SMSes from the locked out phone number. Any Master phone number can unlock any locked phone number. There are only three ways to re-enable a disabled SMS Module: via the re-enable SMS, deleting the phone number and re-enabling it or by physically defaulting the module and setting the module up from factory default.

Desired Action	Code	Command	Ext. Command	Data
Temporarily disable the phone number from accessing the SMS module	1234	Lockout	On	Phone Number
Enable the phone number to access the SMS module after being disabled	1234	Lockout	Off	Phone Number

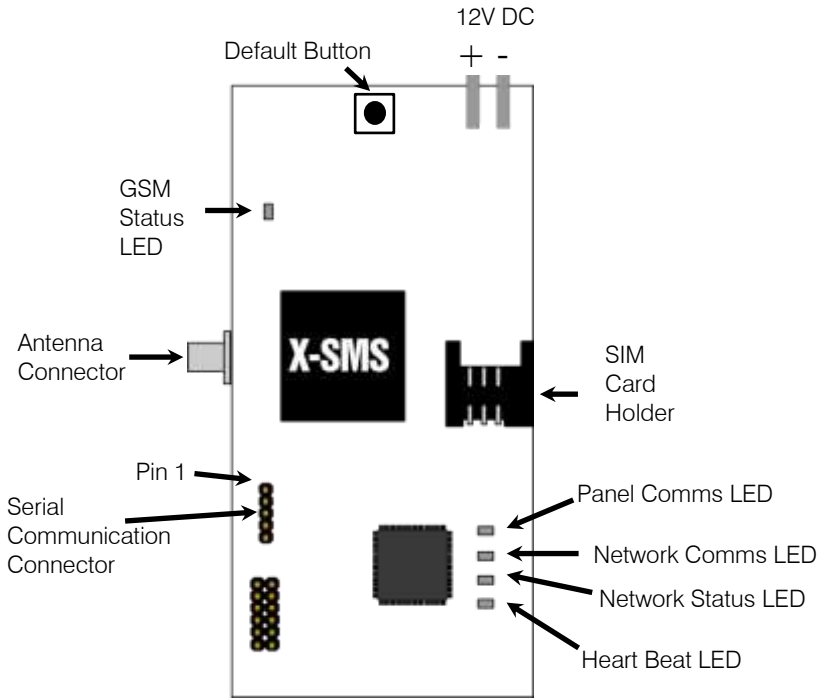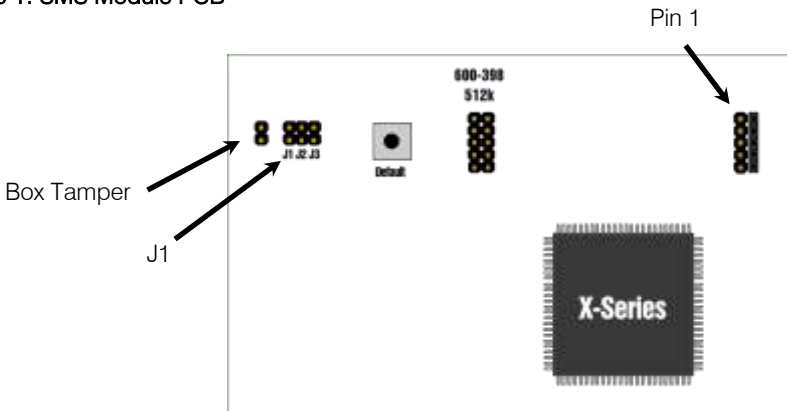| Glossary	
Bypass	Disables the zone from having any effect on the alarm system until the system is disarmed or the bypass is removed
Arm	Arming is setting the system to monitor all zones so that if any zone is violated the alarm is activated.
Stay Zone	A zone that is automatically bypassed when arming in the stay arm mode
Stay Arm	A mode of arming the system that automatically bypasses zones that have been selected to be bypassed in a stay profile. The X-Series has 4 stay profiles
Stay Profile	A collection of zones that have been preselected to be bypassed when the system arms in the stay mode.
Partition	A group of zones that are monitored separately from other groups of zones. The X-Series can have up to 8 partitions
Programmable Output (PGM)	An output that can be triggered by certain events.
Pulse	Changing the output from one state to another and back to the original state.
PulseH	Pulse High will trigger an output from 0V to 12V DC and return to 0V after 2 seconds
PulseL	Pulse Low will trigger an output that has 12V already, down to 0V and then back to 12V DC.
Zone	An area the alarm is monitoring via a security device.

Diagrams

Figure 1: SMS Module PCB

Figure 2: X-Series J1

Pin 1

SMS Module

X-Series Serial
Connector

Pin 1

Figure 3: Serial Connection

Protecting your future
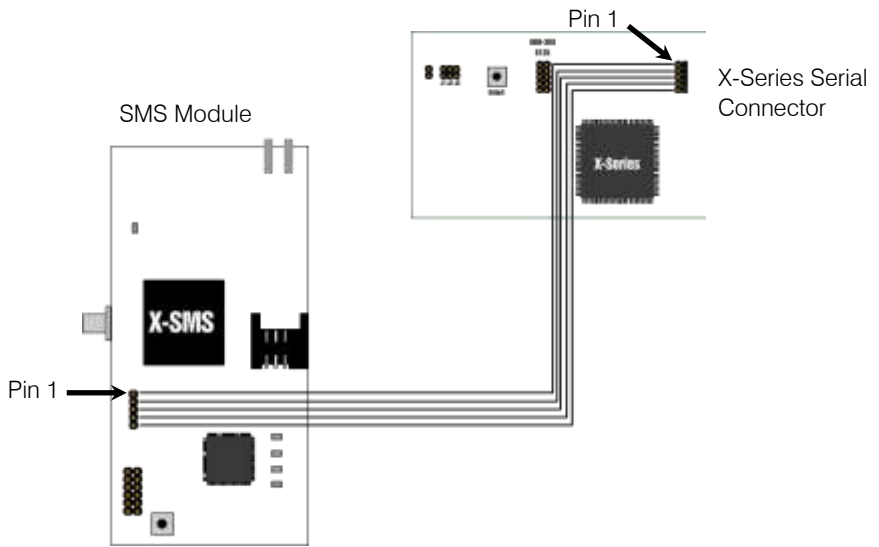
X-Series

Warranty

Inhep Electronics Holdings (Pty) Ltd guarantees all IDS Control Panels against defective parts and workmanship for 24 months from date of purchase. Inhep Electronics Holdings shall, at its option, repair or replace the defective equipment upon the return of such equipment to any Inhep Electronics Holdings branch. This warranty applies ONLY to defects in components and workmanship and NOT to damage due to causes beyond the control of Inhep Electronics Holdings, such as incorrect voltage, lightning damage, mechanical shock, water damage, fire damage, or damage arising out of abuse and improper application of the equipment.

NOTE: Wherever possible, return only the PCB to Inhep Electronics Holdings
Service Centres.
DO NOT return the metal enclosure.

The X-Series Products are a product of IDS (Inhep Digital Security)
and is manufactured by
Inhep Electronics Holdings (Pty) Ltd

WARNING
For safety reasons, only connect equipment with a
telecommunications compliance label. This includes
customer equipment previously labeled permitted
or certified.

This is a professional product, and due
to the nature of the product, should only be installed
by an accredited professional Alarm Installer.

Help Desk Number: 0860 705137*
*Please note that this is NOT a toll free number

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