

T4000X

Expanded Security Communicator **by Inner Range**

P/N: 998530X / 998530XKIT

Installation & Operation Manual. Rev: 1.02

NOTE:

This manual describes the installation and operation of the inputs, outputs and features of the T4000X expansion board and must be read in conjunction with the 'T4000 Security Communicator Installation & Operation Manual'.



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INTRODUCTION

The Inner Range T4000X Security Communicator provides all the standard T4000 features with the addition of 8 inputs and 8 open-collector outputs.

T4000X Additional Features

- 8 Open-collector outputs for control of external devices. e.g. 12V Siren, Strobe, etc.
- 8 Zone inputs. EOL or Non-EOL.
- Option to automatically enable a zone input for monitoring when a state change is detected.
- Regulated 13.8V Power Supply output for Detectors &/or Output devices.
- An output can be nominated to control a 12V Siren/Screamer.
- An output can be nominated to control a Strobe.
- Area Arm/Disarm state is maintained if the T4000X is reset.
- Keyswitch Zone functionality available.
- Remotely firmware updateable.

Parts List

This parts list supersedes the parts list in the T4000 Installation Manual.

<u>Main Parts:</u>	T4000X (998530X)	T4000X in Metal Enclosure (998530XKIT)
T4000X Security Communicator.	1	1
Metal Enclosure. Extra Small		1
18V DC 1.66A Inline Transformer.		1
T4000 Battery Cable Pair. 400mm.		1
Tamper switch.		1
Metal tamper switch bracket.		1
Female 4.8mm quick-connect terminals.		2
Metal PCB Mounting Clip		4 (Already fitted)
M3 x 50mm pan head screw	4	4 (Already fitted)
Antenna 3.5dBi with magnetic base and 2m cable.	1	1
T4000X Installation & Operation Manual (This document)	1	1
T4000 Installation manual.	1	1
<u>Accessory Kits:</u>		
◦ 2-way 3.5mm Screw Terminal connector.	6	6
◦ 3-way 3.5mm Screw Terminal connector.	5	5
◦ 4-way 3.5mm Screw Terminal connector.	3	3
◦ 5-way 3.5mm Screw Terminal connector.	2	2
◦ M3 x 25mm pan head screw	4 (Not required)	4 (Not required)
◦ Metal PCB Mounting Clip	4	4 (Spare)
◦ Self-adhesive Hook & Loop tape. 80 x 50mm	1	1 (Not required)
◦ Dialer interface cable. 611 socket to RJ12 plug.	1	1
◦ 2k2 EOL Resistors	16	16
◦ Self-adhesive Multipath IP Label	1	1

See the T4000 Installation Manual for the list of optional accessories.

INSTALLATION

Power Supply Options

The T4000X has connections for a DC Power Supply input and an optional 12V Sealed Lead-Acid (SLA) Battery.

These connections are labelled “VIN” and “BAT” respectively and allow two power supply options to be supported:

1. External Power Supply. Connect 12 to 24V DC from a battery-backed power supply to either of the ‘VIN’ terminals.
 e.g. A 13.75V output from an Alarm Panel with on-board battery-backed power supply, or a separate battery-backed power supply. In this case, the ‘BAT’ connection is not used.

2. Inline Transformer & Battery.
 Connect 14 - 24V DC to either of the ‘VIN’ terminals and connect a 12V 7AH SLA Battery to “BAT”.
 e.g. Using the T4000 18V DC inline transformer & battery cable kit. (P/N: 999065)
 Note: This kit is supplied with 998530XKIT or purchased separately for the 998530X.

Refer to the wiring diagrams and specifications later in this document for more details.

IMPORTANT NOTE: For either of the options above, ensure that the T4000X power requirements will not cause the power supply’s current limit to be exceeded.

Remember to allow for the current required by battery charging and other devices (detectors, siren, strobe, etc.) that may be powered from the same supply.

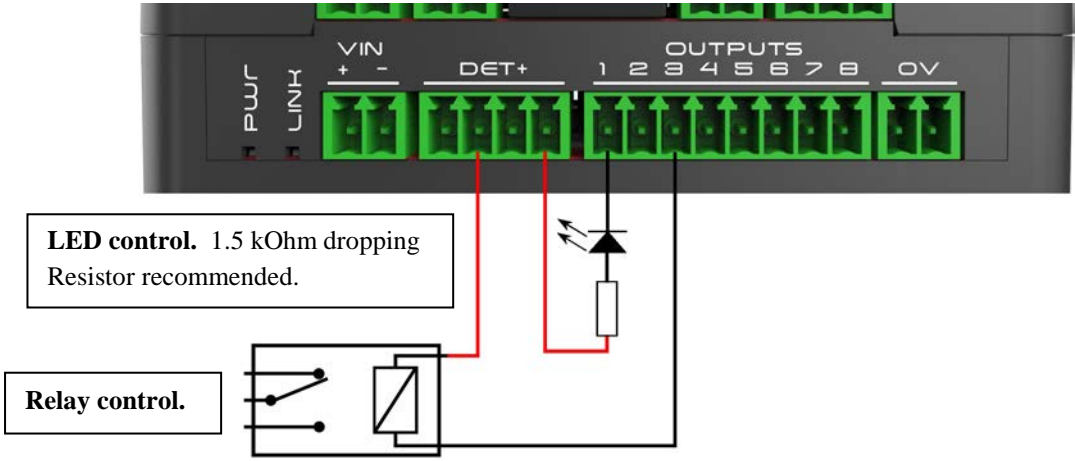
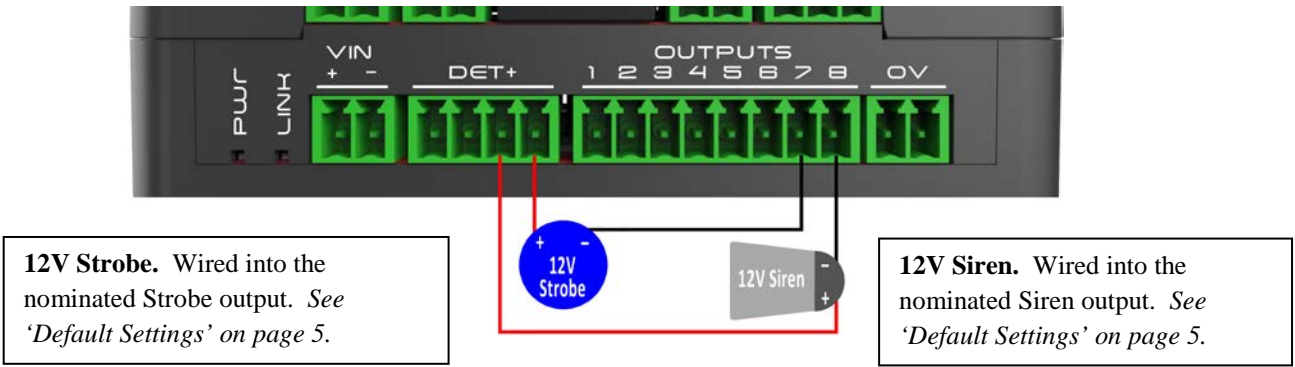
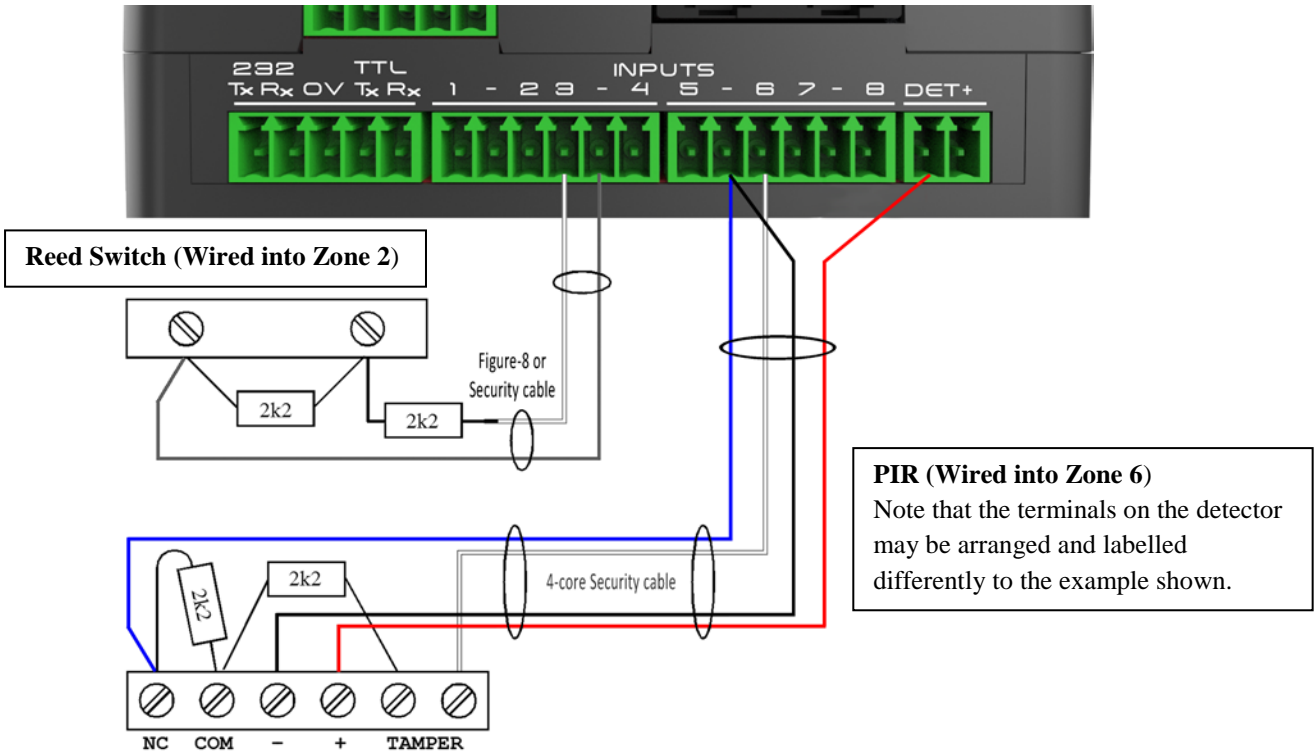
See “Specifications” on the last page of this document for details.

LED Status Indicators

The T4000X has two additional functional status LED’s to identify current power and connection status. These are located nearest the “VIN” connectors on the Power/Ethernet/Outputs side of the unit.

LED	LED State	Description
PWR Green.	OFF Flashing ON ON and flash once every 5 seconds.	No power. Power problem. Power OK. Power OK and System OK.
LINK Orange.	OFF Flashing ON	T4000 comms not configured. T4000 comms are not working. Comms to T4000 OK.

WIRING EXAMPLES



Functionality

General:

- A database default will reset all functionality back to the factory default settings.
- When a state change is detected on a zone, that zone is then automatically enabled for monitoring.

Input Processing:

- By default, the Zone Inputs can be used with normally closed or normally open alarm contacts. i.e. The EOL resistors can be in series or in parallel for an alarm condition. The table below shows the input states with the default 2k2/2k2 EOL configuration selected.
 - Tamper Low Short Circuit
 - Alarm 1k1 (2 x 2k2 resistors in parallel)
 - Sealed 2k2
 - Alarm 4k4 (2 x 2k2 resistors in series)
 - Tamper High Open circuit
- If a zone event (E.g. alarm, tamper, etc.) occurs whilst the Area is armed, the siren auxiliary and/or strobe auxiliary (if configured) will be triggered.
- If a zone is isolated at the time of area disarm, the zone will become de-isolated at that time.
- If the siren auxiliary is on at the time of area disarm, the siren auxiliary will be turned off.
- If the strobe auxiliary is on at the time of area disarm, the strobe auxiliary will be turned off.
- When the area is armed, an activation of any zone state (except for isolate) will trigger the siren and/or strobe auxiliaries (if configured).
- At the time of area arming, all zones will have their states retriggered. This means that any unsealed zones will be reported again.
- Only zones are monitored/processed. This means no system inputs are monitored (E.g. low battery, panel comms etc.)
- The alarm state of a zone can be conditionally reported depending on the state of the area.
- All states other than alarm are reported 24hr (i.e. whenever they occur)
- Zones can be set to Alarm/Seal only.
- Zones can be set to swap Alarm/Seal.
- Each Zone's report type can be configured.
- An auxiliary can be configured to be controlled by a zone with a one-to-one mapping. (E.g. Zone3 controls Aux3, Zone4 controls Aux4, etc.)
- Zones can be named via configuration commands.
- When a key switch zone is configured, when the zone transitions from sealed to alarm the area state will be toggled.
- The Zone Inputs report as Zone numbers 1 to 8.

Default settings

Generate Area arm/disarm events:	Yes
Strobe Output:	Auxiliary Output 7
Siren Output:	Auxiliary Output 8
Siren Time:	4 Minutes
End-of-Line (EOL) configuration:	[2k2 + 2k2] OR [2k2 + 6k8] resistors. Note that the selected EOL configuration applies to Zone Inputs 1 to 7.
Zones 1 to 8 auto enable:	Yes
Zones 1 to 6 options:	Alarm state monitored "instant" when the Area is armed.
Zone 7 options:	Alarm state monitored "24hr" (i.e. report regardless of the area state) when the Area is 'Away' armed and when the Area is disarmed.
Area/group reporting number:	1
Keyswitch zone:	Zone 8.

Specifications

Variations to standard T4000 specifications:

Dimensions:	103mm x 99mm x 48mm.
Shipping Weight (gross):	250g
Current consumption @ 18V DC:	110mA (Idle) + 30mA (GSM Online). (Not including Battery charging)
Typical Battery Backup Time:	62 Hours. (7AH battery powering T4000X only)
Minimum Battery Backup Time:	32 Hours. (7AH battery powering T4000X only)

NOTES: Specifications above supersede the equivalent specification provided in the T4000 Security Communicator Installation & Operation Manual.

Battery backup times assume that the battery is fully charged and that battery installation conditions and replacement intervals are maintained according to the battery manufacturers specifications.

T4000X Expansion Board specifications:

Zone inputs:	8. Software configurable (EOL or Non-EOL) Default setting is 2k2/2k2 EOL.
Zone Input debounce:	300mS
Outputs:	8. Open-collector. 100mA at up to 24V DC.
DET+ Voltage (Typical):	13.8V DC. (Drops to 0V if power supply input is below 11V)
Maximum Output Current:	750mA

Further Reading

The following additional documents are available from the “Technician Downloads” portal on the Inner Range website. (Website login required)

- Datasheet-T4000X Security Communicator.
- MPIP Basic System Admin Guide.
- SkyCommand Action Configuration - Setup Guide
- SkyCommand Inception Door Control - Setup Guide
- SkyCommand Key Switch - Setup Guide
- SkyCommand Notifications - Setup Guide
- SkyCommand Panel Configuration - Setup Guide
- SkyCommand T4000 Router Setup Guide
- A range of guides for the Upload/Download feature for compatible alarm panels.

Disclaimer:

1. The manufacturer and/or its agents take no responsibility for any damage, financial loss or injury caused to any equipment, property or persons resulting from the correct or incorrect use of the system or it's peripherals. The purchaser assumes all responsibility in the use of the system and its peripherals.
2. While every effort has been made to ensure the accuracy of this manual, the manufacturer assumes no responsibility or liability for any errors or omissions. Due to ongoing development, product specifications and the contents of this manual are subject to change without notice.

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