

Concept 4000/5000

Weatherproof Terminal Module.

P/N: 995010

INSTALLATION MANUAL

Overview

The Weatherproof Terminal Module incorporates an IP65 rated keypad and provides the following operations:

1. Single Door PIN code Access control including the “auto area off” and REX/REN button options.
Note: A Wiegand Reader can also be connected in parallel with the keypad to provide “PIN or Card” operation.
2. Control and status indication of a single “Associated Area” assigned to the Module, or a User’s “Extra Area”.
3. “Card & PIN” and “Card Only” operation. (V5.7 or later) Note that a 12V Wiegand Card Reader must be connected in parallel with the keypad on the same Weatherproof Terminal Module.
4. Dual User operation supported in “Card Only” and “Card & PIN” modes.

The Weatherproof Terminal supports all Concept 3000/4000/5000 1 to 8 digit PIN codes.

The keypad features a CODE lamp (green), an ARMED lamp (red), numeric keys 0 to 9, OK key and an ON/OFF key.

Beeper feedback is provided for each key press and the beeper can also be controlled by an Auxiliary output.

Three methods of keypad tamper protection are provided:

- A built-in optical device detects removal of the keypad from its mounting surface.
- Presence of the keypad connections is monitored via the data inputs on the PCB.
In addition to this, a Tamper switch input is also provided on the PCB for cabinet tamper monitoring.
- If 3 unsuccessful logon attempts are made in succession, the keypad will be locked out for 60 seconds.
(In Weatherproof Terminal Firmware V1.02 or later, this can be altered to 10 attempts if required by setting DIPswitch 8 to ON.)

IMPORTANT NOTES:

- 1) Control Module Firmware must be V5.60 or later.
- 2) The Weatherproof Terminal is enrolled on the LAN and programmed as a Reader Module. (MENU, 7, 2, 4) Programming options relating to “2nd Door / 2nd Lift”, “2 Door Mode”, “Reader 2...” and “Backup Cards” should not be programmed.
- 3) Area Arm/Disarm operation is enabled by choosing the appropriate setting in the “Reader Arm Mode” option.
- 4) Separate Inputs are provided for Exit & Entry buttons. Regardless of whether these inputs are used for Exit or Entry buttons, they must be programmed for Exit button operation. i.e. Select the “B”utton option in the “Exit Options” of the Access Group assigned to the Door. Note that Review will therefore always record the direction for the button operation as “Exit”.
- 5) Zones Rnn:Z02 to Z05, Z07 and Z08 do not exist on the Weatherproof Terminal Module and therefore must not be programmed.
- 6) Auxiliaries Rnn:X07 and X08 do not physically exist on the Weatherproof Terminal Module and therefore can only be used as phantom Auxiliaries.
- 7) The keypad is fitted with a 1 metre pigtail cable. This cable may be extended or trimmed to suit the installation, but note that if trimmed to less than 500mm the warranty on the keypad will be void and any repair or replacement will incur a charge.

A “Programming summary” and “Operations Summary” is provided on Page 8.

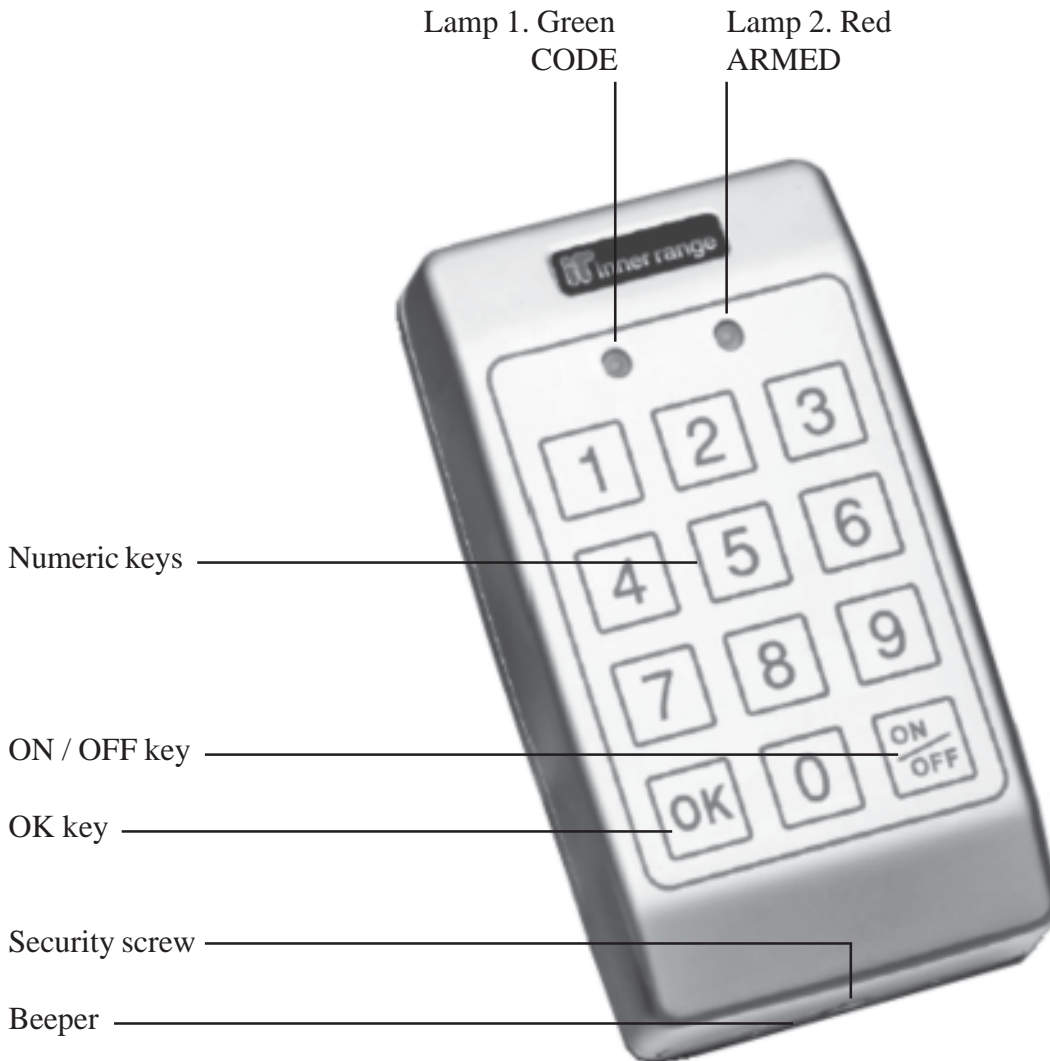
For more details refer to the Programming & Reference Manual V5.6 or later.

Parts List

- Weatherproof Terminal Module PCB assembly.
- PCB Installation Kit in Plastic bag containing:
 - 1 x 3 Way Plug on Screw Terminal.
 - 3 x 6 Way Plug on Screw Terminals.
 - 1 x 5 Way Plug on Screw Terminal.
 - 5 x 2k2 End-of-line resistors. (red-red-black-brown-brown)
 - 5 x 6k8 End-of-line resistors. (blue-grey-black-brown-brown)
 - 1 x 1N4004 protection diode. (For connecting across lock coil)
 - 1 x 6.3mm Quick Connect.
 - 1 x 500mA Amp Fuse. (Spare)
 - 2 x Jumper Link 0.1”.
- Inner Range Weatherproof keypad with 1 metre cable.
- Installation Manual. (This document)
- Keypad Installation Kit consisting of:
 - 1 x Self-adhesive drilling template.
 - Plastic bag containing:
 - 2 x Plastic wall plugs
 - 2 x Countersunk self tapping screws
 - 1 x Countersunk security screw.
 - 1 x Right-angle security screw driver.

Installing the Weatherproof Terminal.

Keypad layout and functions.



Lamp 1	Green	CODE (Logged on)	On while User is logged on.
Lamp 2	Red	ARMED	Current Area status. Only displayed while logged on. On = Area On.
Numeric keys		PIN code Entry. When logged on, pressing the 0 key will logoff the User.	
OK key.		Pressed after PIN code to logon. Door access request while logged on.	
ON/OFF key.		Toggle Area state while logged on.	
Beeper.		Beeper control wire (Yellow) may be connected to Auxiliary 6 (X6) to provide a DOTL Warning (If the "Warn DOTL" option is enabled in Reader Module programming), or to Auxiliary 4 (X4) to provide other features such as Entry/Exit delay warning, etc. (Rxx:X04 will need to be assigned to the required Area Auxiliary/s)	

NOTE:

The keypad is fitted with a 1 metre pigtail cable.

This cable may be extended or trimmed to suit the installation, but note that if trimmed to less than 500mm the warranty on the keypad will be void and any repair or replacement will incur a charge.

Cabling.

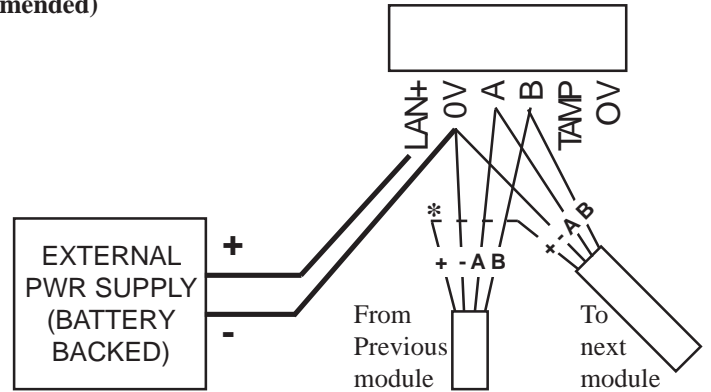
LAN and Power Supply Wiring

MODULE POWERED FROM EXTERNAL SUPPLY (Recommended)

e.g. Inner Range Small Powered Low Profile Enclosure.
P/N: 995200PE

Heavy duty Fig. 8 cable (24/0.20 or 14/0.20) recommended for Ext. Power Supply wiring.

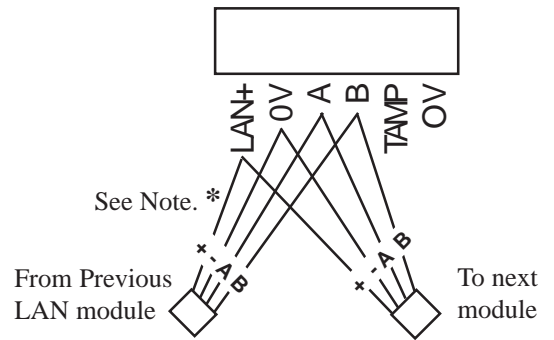
* Note: If required, the LAN to subsequent Modules may derive +12V from “+VE” of the incoming LAN cable.



MODULE POWERED FROM THE LAN

(Not recommended if a lock is connected)

* Note: If both “LAN +VE” wires provide a Power supply source, the one that is not required to power the Module **MUST NOT** be connected to the Module.
i.e. +VE connections from two different power supply sources must never be connected together.



Input Wiring

Door Reed and Tongue Sense Inputs are wired using the End-of-Line (EOL) Resistors.

The “REX/REN” button Inputs are wired to the Normally Open contact of the respective button, while the COMMON contact is connected to 0V. EOL resistors are not required.

ZONE INPUT AND EXIT/ENTRY BUTTON WIRING.

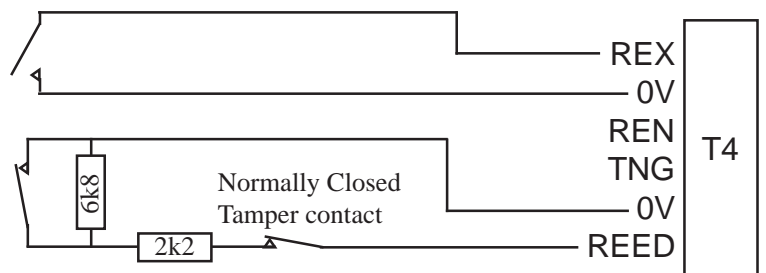
Notes:

“REN” button wired as per “REX”.

Tongue Sense (“TONG”) wired as per “REED”.

Normally Open Button contact. (REX / REN)

Norm. Closed Alarm contact. (REED / TONGUE)



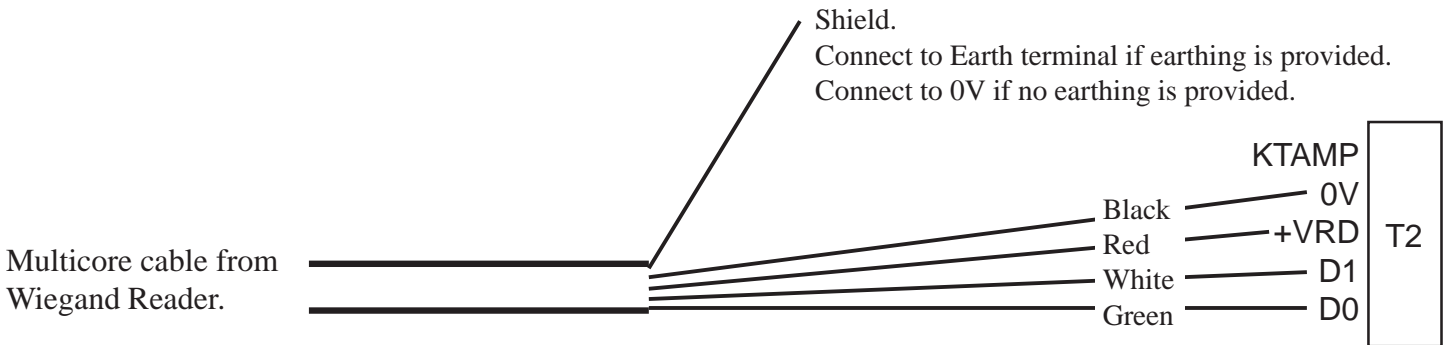
Reader Wiring.

A Wiegand Reader may be wired in parallel with the keypad to provide “Card Only”, “PIN or Card” or “Card & PIN” Door access operation. See the “Overview” on page 1, and “Programming Summary” and “Operations Summary” on page 8 for more details. The Reader supply (+VRD) is fixed at 12V.

i.e. A 5V Reader supply is not available and any Wiegand Reader connected must be able to accept a 12V supply.

Readers with Clock and Data output (e.g. Magnetic Swipe Readers), and Readers that will only operate from a 5V supply are not supported.

LED and/or beeper control wires provided on the Reader can be wired directly to an appropriate Auxiliary output on T5. (Dropping resistor is not usually required) See information supplied with Reader for LED control details.

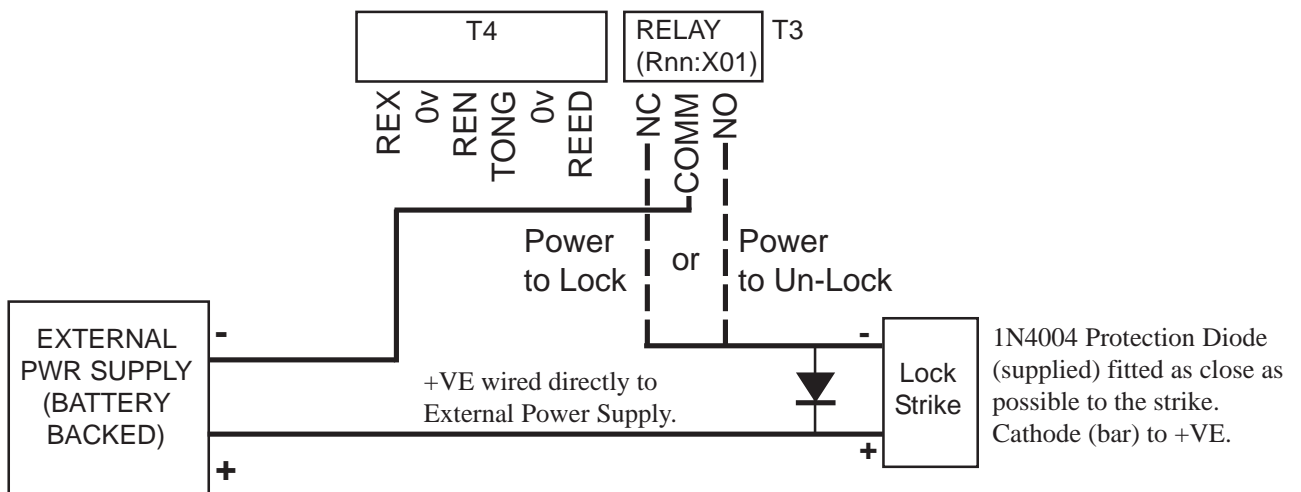


NOTE: Use shielded Data cable. Tycab DMC6702, Garland MC7-6S, etc. DO NOT use twisted pairs!

Lock Wiring.

Heavy duty Fig. 8 cable (24/0.20 or 14/0.20) is recommended for all Power & Lock wiring.

CAUTION: A voltage selection link (LK2) for the Lock relay Common contact is provided, and is located next to connector T3. Note that this link should only be used when switching low-current non-inductive loads. When controlling locks, always connect the lock as shown below and do not fit link LK2.



DIPswitch Settings

Note that the Module must be powered down when making any DIPswitch setting changes.

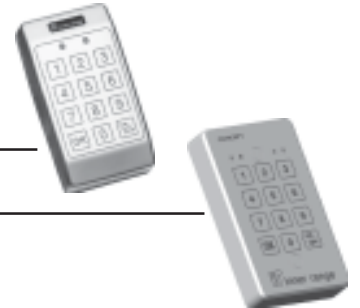
MODULE NUMBERING

The Weatherproof Terminal Module is enrolled on the LAN as a Reader Module (R). The Module number is set to a number between 1 and 64 using DIPswitches 1 to 6. **The Module number equals $n + 1$, where n is the binary number set on DIPswitches 1 to 6.**

Module No:	DIPswitch: 1	2	3	4	5	6
	Binary value: 1	2	4	8	16	32
1	off	off	off	off	off	off
2	ON	off	off	off	off	off
3	off	ON	off	off	off	off
4	ON	ON	off	off	off	off
5	off	off	ON	off	off	off
6	ON	off	ON	off	off	off
7	off	ON	ON	off	off	off
8	ON	ON	ON	off	off	off
9	off	off	off	ON	off	off
through to						
64	ON	ON	ON	ON	ON	ON

KEYPAD TAMPER INPUT. POLARITY SETTING (“KTAMP” on connector T2)

DIPswitch 7.	ON (Seal = Low)	Setting for current Rosslare Weatherproof keypad. _____
	OFF (Seal = High)	Setting for legacy 4-LED Weatherproof keypad. _____



KEYPAD LOCKOUT

If a number of unsuccessful logon attempts are made in succession, the keypad will be locked out for 60 seconds and the CODE lamp will flash continuously during the lockout time. DIPswitch 8 determines the number of attempts required for keypad lockout.

DIPswitch 8.	OFF	3 attempts.
	ON	10 attempts. Weatherproof Terminal Firmware V1.02 or later only.

Note: If an error is made while entering a PIN code, the ON/OFF key can be used to clear the digits entered, so the PIN can be entered again without registering an unsuccessful attempt.

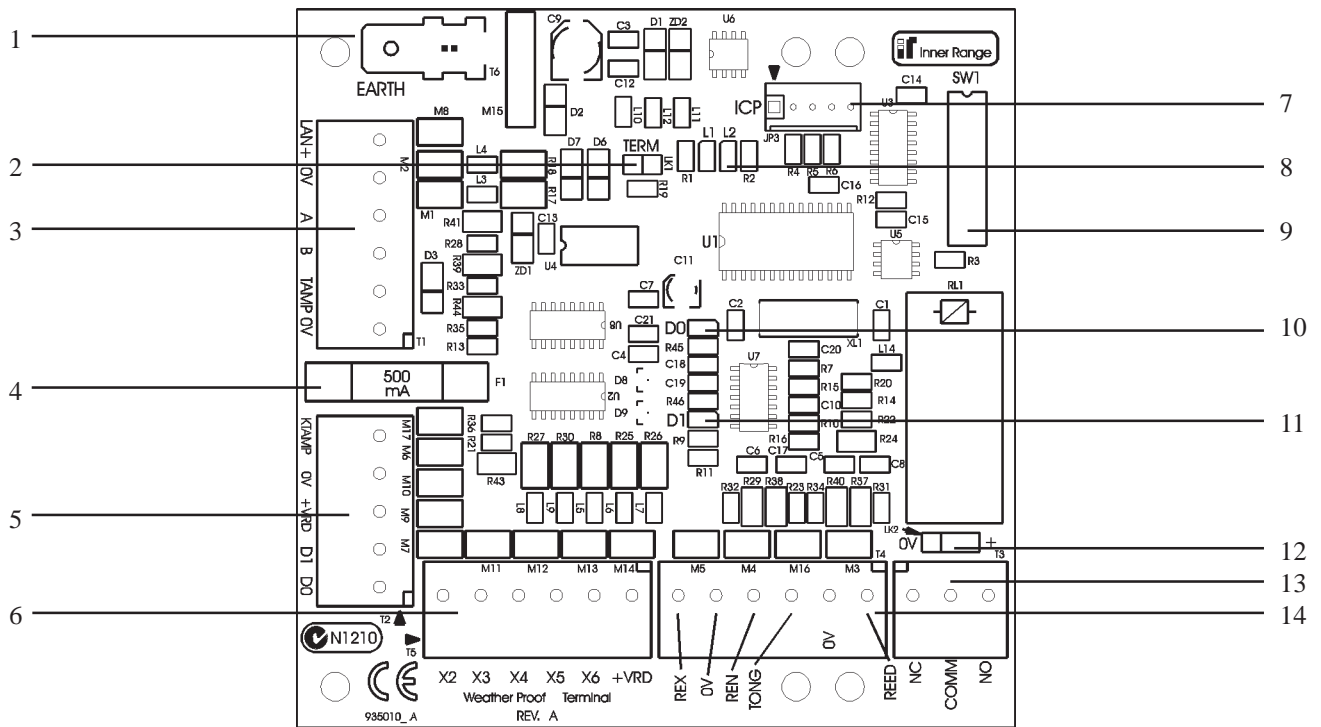
Fault Lamps

L1 (RX)	L2 (TX)	EXPLANATION / REMEDY
ON	ON	Module is un-addressed.
OFF	ON	Module type unknown. Firmware upgrade required to Control Module.
Flash	ON	Duplicate Module. This module number is already in use by a module of the same type.
Flash	Flash	Module number selected is too big for Control Module RAM size. Select a lower Module number.
ON	OFF	Too many modules on Network for Control Module RAM size.
Alternating Flash		EEPROM fault. Return for service.

Link Settings

LK1	TERM	Off:	Unterminated.
		On:	Terminated. Only fitted if Module is one of the two furthest Modules from the Control Module.
LK2	RELAY COMMON CONNECTION	Not fitted.	Relay common is voltage-free.
		+	Relay common is +12V.
		0V	Relay common is 0V.

CAUTION: Note that this link should only be used when switching low-current non-inductive loads. When controlling locks, always connect the lock as shown on page 5 and do not fit link LK2.

THE WEATHERPROOF TERMINAL MODULE PCB

1. Earth. Connect to building earth or electrical earth.
2. LK1. TERM. Fitted only if this unit is one of the two furthest modules from the Control Module.
3. T1. LAN, External Power & Tamper Switch Connections.
 LAN+ LAN +ve connection.
 0V LAN 0V (-VE) connection.
 A LAN Data A connection.
 B LAN Data B connection.
 TAMP Tamper Switch input.
 0V Ext. Power Supply -VE input.
 & Tamper switch 0V return.
 See "LAN & Power Supply Wiring" on page 4.
4. F1. 500mA FUSE M205. Do not substitute higher value.
5. T2. Keypad & Reader connections.
 KTAMP Keypad tamper connection.
 0V Keypad/Reader 0 Volt (-ve) connection.
 +VRD +12V Keypad/Reader power.
 D1 Keypad/Reader Data 1's input.
 D0 Keypad/Reader Data 0's input.
6. T5. Auxiliary Outputs.
 X2. Keypad Lamp 1 (CODE) control.
 X3 Keypad Lamp 2 (ARMED) control.
 X4 Spare. May be used for keypad beeper.
 X5 Spare.
 X6 DOTL Warning (If enabled. See pages 2-3)
 +VRD +12V Auxiliary power. (Not required for Auxiliaries connected to the keypad)
7. JP3. Factory use only.
8. L1 (RX) LAN Data Transmit & FAULT DIAGNOSIS
 L2 (TX) LAN Data Receive & FAULT DIAGNOSIS
9. DIPswitch SW1: (See table on page 6)
 Switch 1-6. Module number.
 Switch 7. Keypad tamper input polarity.
 Switch 8. Lockout attempts.
10. D0 Keypad/Reader Data 0's indication.
11. D1 Keypad/Reader Data 1's indication.
12. LK2. Lock relay Common contact voltage selection.
 Only use when switching low-current non-inductive loads.
 When controlling locks, connect the lock as shown on page 5 and do not fit this link.
 Not fitted. Common contact is voltage-free.
 + Common contact is +12V.
 0V Common contact is 0V.
13. T3. Lock Relay Connections. (Rnn:X01)
 See "Lock Wiring" on page 5.
14. T4. Input connections.
 REX Exit Button Input. *2
 0V 0 Volt return for Input connections.
 REN Entry Button I/P. *2
 TNG 1 Optional Tongue Sense I/P. *1 & 3
 OR Zone 6 I/P.
 REED Reed Switch Input. *1 (Zone 1 I/P)

***NOTES:**

1. End-of-line (EOL) Resistors required.
2. EOL's NOT required. See Note 4 on page 1.
3. "Tongue Sense" selected in Reader Module options.

Specifications

Electrical.

Power Supply Input:	11V to 14V DC		
Current Consumption.	Standby:	40mA.	
	Logged on:	45 to 55mA.	
	X01 (Lock relay) active only.	72mA.	
	All Auxiliaries active: (Lock relay, keypad lamps and beeper all on)	180mA. (Beeper = 90mA)	

(These figures do NOT include current drawn by any Reader connected, or by any device connected to the Auxiliary outputs other than the weatherproof keypad connections)

NOTE: Allow 50 to 120mA for small Prox Reader (~10cm range)
 Allow 120 to 180mA for standard Prox Reader (~15cm range)
 These values are general approximations.
See information supplied with Reader for actual current consumption.

Lock Relay Contacts:			
Voltage:	30V DC maximum.		
Current:	750mA maximum.		

Fuse Protection:	500mA Reader Power Fuse.	Reader current must not exceed 300mA.	
ALWAYS REPLACE WITH SAME FUSE TYPE AND VALUE!			

Keypad Cable Length:	The keypad pigtail cable may be extended using Shielded, multicore data cable (NOT twisted pair) up to a length of 30 metres with 7/0.20 cable, or 60 metres with 7/0.30 cable.		
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Physical.

Installation Environment.

Module PCB:	0° to 40° Celsius and 15% to 85% Relative humidity (non-condensing)		
Keypad:	-30° to +60° Celsius and 0 to 95% relative humidity (non-condensing). Moisture & Dust rating = IP65.		

PCB dimensions:

Length: 96mm	Width: 96mm		
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Keypad dimensions:

Height: 120mm	Width: 65mm	Depth: 27mm	
Distance between mounting hole centres:		83.5mm	
Mounting hole diameter:		4mm (For 3.5mm, 5/32" or ANSI #6 screw)	

Programming Summary

The Module is programmed similar to a Single Door Access Module with the following variations:

- Reader Purpose must be set to "Door Control"
- Reader Format must be a Wiegand format.
- Reader Keys must be set to "IR Weather" which configures correct Auxiliary operation for the CODE and ARMED lamps, and enables support for special operations such as Card & PIN mode.
- Reader Arm Mode determines the Weatherproof Terminal Area Arm/Disarm Control operations.
 - None. No Arming/Disarming.
 - Extra Area if PB. User's Extra Area can be Armed/Disarmed.
 - Entry Area if PB. Weatherproof Terminal's "Associated Area" can be Armed/Disarmed.
- Reader "Associated Area" is an option introduced specifically for the Weatherproof Terminal, that defines the Area to be controlled by this Weatherproof Terminal if the "Entry Area if PB" option is selected.
- Access Group Entry Mode or Exit Mode can be set to any option in Control Module Firmware V5.7 or later. "Card Only" and "Card & PIN" are not supported in V5.6 Firmware.
- Backup Cards and a Card Cache are not supported.

Operations Summary

This table shows the operations available with different Entry/Exit mode and Single/Dual User options in Access Group programming.

	Card Only	PIN only	Card & PIN
Single User	Yes	Yes	Yes
Dual User	Yes	NO	Yes
Note: PIN or Card. Refer to "Card Only" & "PIN Only" columns.			

Due to on-going product development this manual is subject to change without notice.