Microlock® 1000-Series

1 or 2 Door Stand Alone Access Control Unit

Installer and User Guide

6656-0290 Issue 5

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Notices

Manufacturer's details

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Introduction

Microlock 1000-Series

The TDSi Microlock 1000-Series – IR 1000, Prox 1000 Mag 1000 and ACU 1000 - provide stand alone access control to one or two doors, with the capacity to store up to 1000 cards and/or PINs in memory. The modular design allows either the reader and controller to be mounted alongside each other or with the controller on the secure side of the door with the reader located remotely.

The 1000-Series also includes a range of useful access control features, such as multiple time zone control and the option to be attached to a printer to produce an audit trail of events.

1000-Series controllers and readers are suitable for internal and external installation.

A variant of the1000-Series, TDSi F1000, can additionally be used to provide access control and cost-centre accounting for the use of business equipment such as photocopiers. For more information on this and other TDSi products, please contact TDSi.

Equipment Provided

The following is provided as part of every 1000-Series package:

- Microlock 1000-Series Controller
- 1 Infra-red, Proximity or Magnetic-stripe reader (dependant on variant supplied)
- Installation kit
- Installation and Operating Instructions
- 10 User cards

Additional Equipment Required

Electric Lock Mechanism

Either power to lock or power to open configuration.

Power Supply

10-14 V DC, 500mA (for 1000-Series controller)

Note: TDSi recommend that the 1000-Series and electric lock mechanism be powered from separate power supplies.

Additional Readers (optional)

For 2 reader installations the second reader must be ordered separately.

Part Numbers

5002-0372: Additional Microcard reader
5002-0350: Additional Proximity reader
5002-0360: Additional Magnetic reader
5002-1281: Proximity Reader with keypad and display
5002-1283: Dataline keypad with display (for use with additional reader)

Reader Backplate Kit (optional)

For installations where the reader is to be installed alongside the 1000-Series controller, an additional reader backplate is required to enable the reader to be mounted at the same depth from the wall as the controller.

Part Number

4305-0120: Reader Backplate Kit

Stand-by Battery (optional)

If mains power fails, then a stand-by battery will keep the 1000-Series operating for up to 30 hours with a 6Ah battery. This depends on whether the lock is powered from a different power supply and if so on its power consumption. If powered separately, then this will also need its own stand-by power supply to remain operational in the event of power failure. The memory in a 1000-Series controllers will not be lost in the event of power failure and therefore is not dependant on any stand-by battery.

Specification

12v sealed lead-acid type (“gel cell”). Yuasa 6Ah recommended.

Door Sensor (optional)

A magnetic door sensor is required if you want to make use of either the "door forced" or "door ajar" alarm features or “door open” or “door closed” display/printer messages.

The door sensor also provides an extra level of security, in the following way. If the lock release time is set to, say, 10 seconds, it is quite possible for someone to get through the door in only two or three seconds after using their card. This leaves seven or eight seconds of 'un-expired' time, during which (if no door sensor was fitted) the door could still be opened. However, if a door sensor is fitted, then as soon as the door opens the lock release is de-energised. The door re-locks as soon as it closes.

Note, a door sensor input is only available for single reader installations.

Specification

“Door closed = Contacts closed”

Egress Button (optional)

If you wish to make use of the “door forced” or “alarm shunt” features, then an egress button must be used to allow exit. If an egress button is not fitted, when the door is opened from the inside (i.e. without using a card or PIN), either the “door forced” alarm will activate or the “alarm shunt” will fail to operate (depending on which of these two features is in use).

Specification

“Momentary close”

Tamper Switch (optional)

The magnet fitted to the rear of the 1000-Series controller can be used to operate a Normally Open magnetic door sensor fitted in the wall behind the unit. This can be used to provide an input to an existing alarm system in the event of the unit being levered from the wall or the casing being opened by an unauthorised person.

Heater (optional – recommended for low temperature installations)

Microlock 1000-Series controllers are suitable for installation in environments where the temperature does not fall below -20ºC or exceed +70ºC. However, to improve performance in installations where the temperature is likely to fall below 0ºC, it is recommended that a 33ohm, 7W heater resistor be fitted inside the casing. See page 21 for heater installation details.

Specification

33ohm 7W. Meggit CGS , Type SBCHE6, 33R or equivalent.

RS Components stock number: 206-0874

Reader Options

Reader 1

Reader Only	**Keypad/Reader + Keypad**
Microcard (TDSi infra-red)	Controller Keypad only
Proximity	Dataline Keypad with Display
Magnetic Stripe	Microcard, Proximity or Magnetic reader + Controller Keypad (i.e. reader installed alongside 1000-Series controller)
	Microcard or Magnetic reader + Dataline Keypad with Display (i.e. reader with separate keypad installed remote from 1000-Series controller)
	Proximity reader with integral Dataline Keypad and Display

Reader 2

Reader Only	**Keypad/Reader + Keypad**
Microcard (TDSi infra-red)	Dataline Keypad with Display
Proximity	Microcard or Magnetic reader + Dataline Keypad with Display
Magnetic Stripe	Proximity reader with integral Dataline Keypad and Display

Note: The controller keypad can be used in conjunction with Reader 1 ONLY.

Technical Specification

Controller

Operating Temp	-20ºC* - +50ºC
Humidity	Suitable for external installation in sheltered location
Dimensions	120x100x42 mm
Power Supply	10-14V DC 250 mA max (without optional heater) 10-14V DC 750 mA max (with optional heater fitted)
Relay Contacts	2A 30V DC Changeover

*With optional heater fitted

Readers

	Microcard	**Proximity**	**Magnetic**
Operating Temp	-40ºC - +65ºC	-20ºC - +55ºC	-10ºC - +50ºC
Humidity	Waterproof	Waterproof	95% rh non-condensing
Dimensions*	40x101x27	40x101x27	40x101x27
Power Supply	12V DC 50mA max	12V DC 50mA max	5 V DC 5mA max

*Without optional reader mounting backplate fitted

Keypads/Readers with Keypads

	Dataline Keypad/Display	**Proximity Reader with Keypad/Display**
Operating Temp	-10ºC - +50ºC	-10ºC - +50ºC
Humidity	Waterproof	Waterproof
Dimensions	120x100x27 mm	120x100x27 mm
Power Supply	10-14 V DC 120mA max	10-14 V DC 120mA max

Maximum Cable Distances

Product	**Reader type**	**Max cable distance**	**Cable specification**
IR 1000	TDSi Infra-red (Microcard)	140m	Belden 9730 or equivalent
Prox 1000	TDSi 10cm Proximity	150m	Belden 9730 or equivalent
Mag 1000	TDSi Magnetic reader	60m	Belden 9730 or equivalent

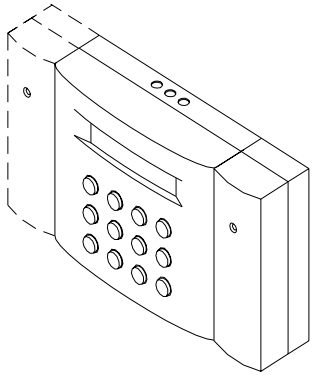
Note, all cable lengths quoted are for guidance only and cannot be guaranteed.

Installation

Mounting the Controller and Reader

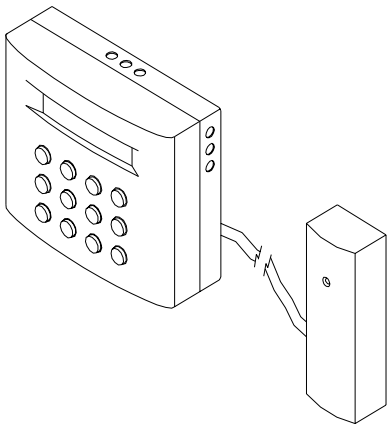
The Microlock 1000-Series offers two reader mounting configurations:

- Controller and reader mounted alongside each other, typically for internal installations, where Card and/or PIN entry is configured. Note, reader can be mounted on either side of controller.



Note! For installation in this configuration, the additional reader backplate (part number 4305-0120) should be used. This allows the reader to be mounted at the same depth as the controller.

- Reader installed remotely from controller, typically where the controller is on the secure side of the door and the reader external or where a second reader is installed.

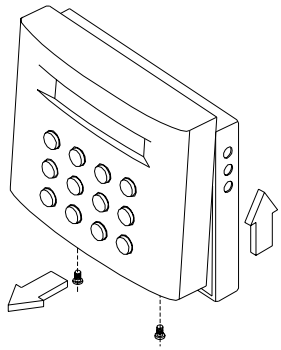


See page 8 for maximum cable distances.

Important! The controller should be mounted where the temperature does not fall below -20º C or exceed +50º C

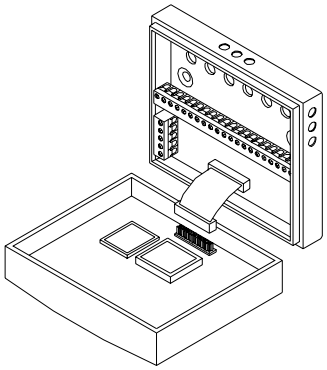
Mounting the Reader alongside the Controller

1



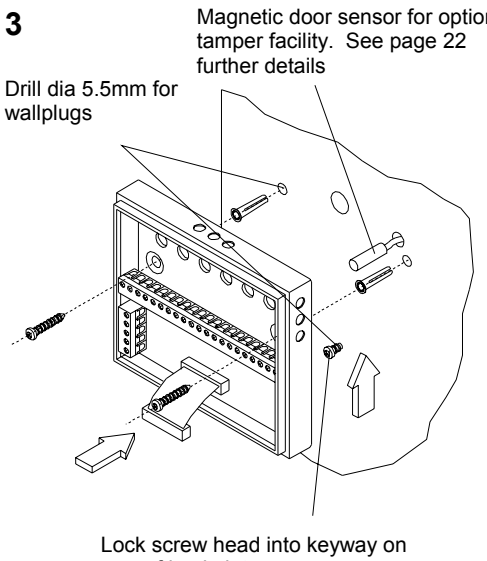
- Remove the two securing screws from the underside of the unit.
- Gently pull the bottom of the plastic casing forward and lift the cover up and away from the backplate. (Be careful not to pull the casing too far forward, otherwise it is not possible to lift the cover away).

2



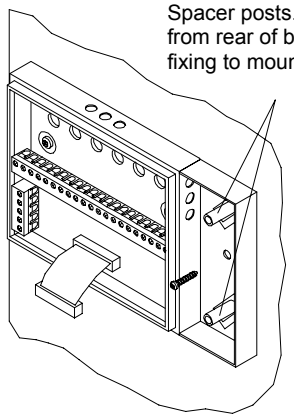
- Detach the casing from the backplate by removing the ribbon cable connector from the pcb inside the plastic casing.

3



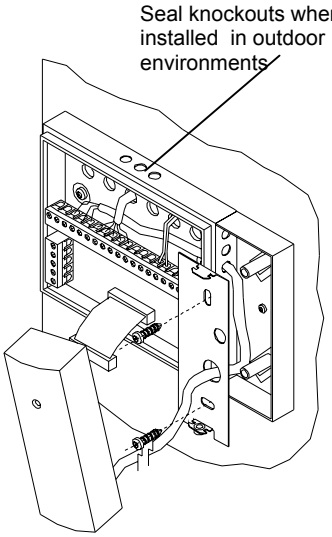
- Fix the smaller of the supplied fixing screws into the mounting surface (Drill dia 5.5 for wall plug). This will lock into the keyway on the rear of the backplate. **Note**, sufficient space should be left underneath the backplate for a screwdriver to be used to replace the casing securing screws later.
- Mark and drill other screw and cable holes where applicable. Cables may enter the casing either from the rear (as shown in these installation notes) or via the top or sides using the knockouts, which can be removed by tapping with a sharp object such as a screwdriver. **Note**, if knockouts are removed the unit will no longer be watertight.
- Insert wall plugs and screw backplate to mounting surface.

4



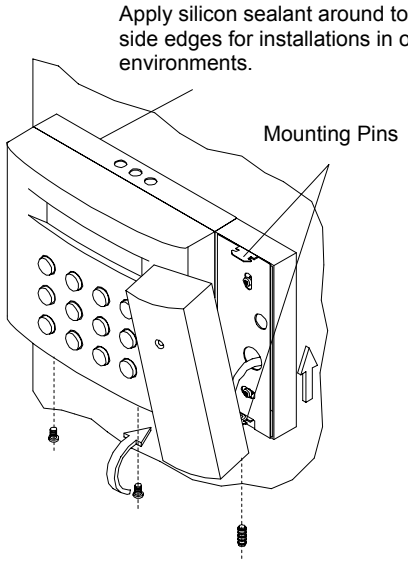
- Fit spacer posts to mounting bracket by attaching with M4 screws provided, fitted from rear of bracket.
- Fix the reader mounting bracket securely, with the flat face against the mounting surface and the open edge butted firmly against the backplate as shown.
- Utilise one of the knockouts in the side of the backplate for the reader cable to enter the main casing. **Note**, this must be re-sealed for external applications.
- The reader mounting bracket may be fitted

5



- Cut reader cable to length and feed through reader backplate and into the main casing via a knockout.
- Fix the reader backplate to the mounting bracket using screws provided.
- Feed power, lock strike, door sense, egress and tamper cables into the main casing and connect as appropriate. See page 15 for wiring configuration details.

6



- Reattach the main controller casing to the backplate via the ribbon cable and refit to backplate.
- Locate reader over backplate mounting pins. Push reader upwards to lock into position.
- Secure controller and reader to backplates with fixing screws.
- For external installations, it is recommended that silicon sealant be applied around top and side edges of backplate.

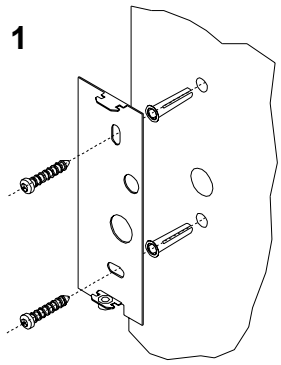
Mounting the Reader and Controller separately

Controller

Follow the instructions for installing the controller on the previous pages. Do not fit the additional reader mounting bracket alongside the controller.

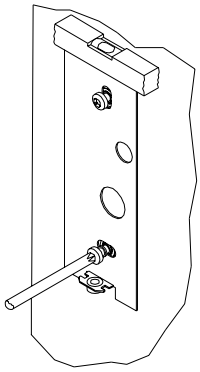
Reader

1



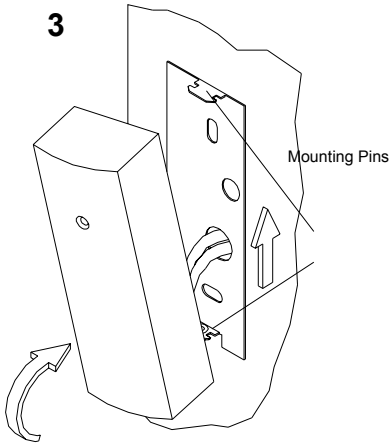
Mark and drill screw/cable holes. Insert wall plugs into mounting surface. Drill dia 5mm holes for wall plugs

2



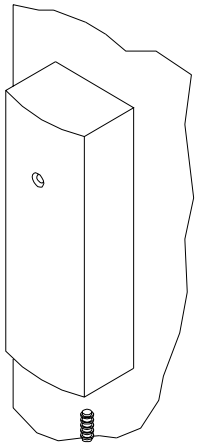
Screw backplate to mounting surface. Check backplate is square and level before tightening fixing screws.

3



Feed reader cable through hole in backplate. Locate reader over backplate mounting pins. Push reader upward to lock in position.

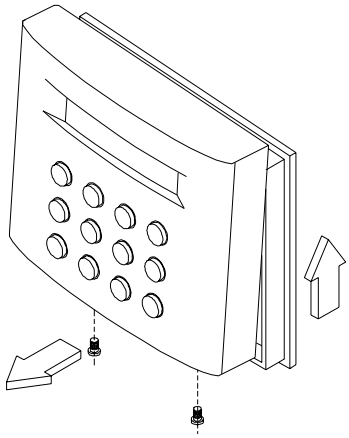
4



Secure reader to backplate with fixing screw.

Installing a Proximity Reader with Keypad and Display/Datline Keypad with Display

1

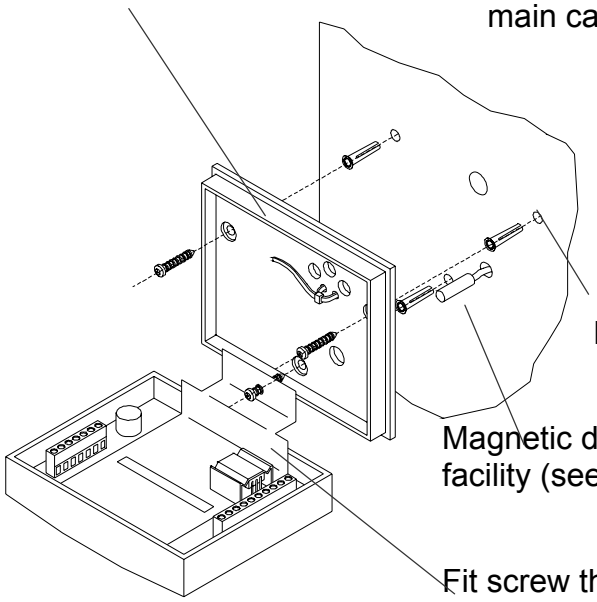


- Remove the two securing screws from the underside of the unit.
- Pull the bottom of the plastic casing forward and lift the cover up and away from the backplate.

2

Fit cable tie to backplate.
DO NOT fully tighten.

- Screw unit to mounting surface, attaching main casing to backplate as illustrated.

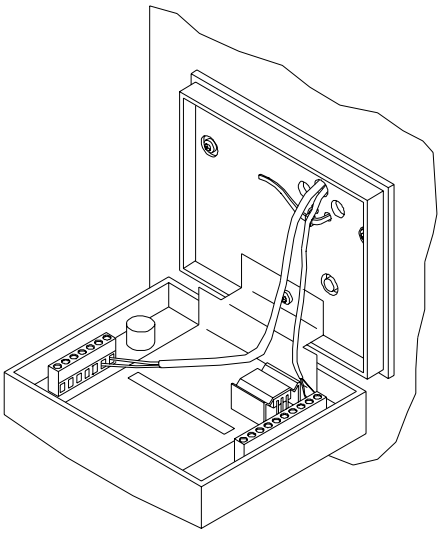


Drill dia 5.5 for wall plugs.

Magnetic door sensor for optional tamper facility (see page 21 for details).

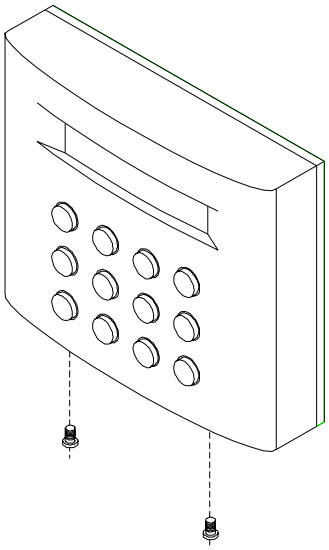
Fit screw through hinge label and backplate. Secure into mounting surface.

3



- Feed power and data connections through backplate and connect to terminals as appropriate (see page 19 for wiring details.
- Note! Ensure cables are routed inside the unit such that they will not come into direct contact with heat sink when unit is in operation.
- Before closing casing, twist cable earth braids together, secure with crimp provided and feed behind cable tie. Tighten tie to secure braids together.

4



- Fit main casing by positioning lugs over slots in top of backplate.
- Secure casing in place with fixing screws.
- For external installations, it is recommended that a silicon sealant be applied around the top and side edges of the backplate.

Wiring and Connections

Important installation notes

- It is essential that only screened cables are allowed to enter the 1000-Series casing.
- The shield of each cable must be grounded at one end only, usually under the clamping bars provided on the metal backplate of the casing.

  However, if peripheral equipment (such as readers, lock-strike, etc) are mounted on a metal surface, ensure that the metal surface is grounded and that the ground wire is grounded at the peripheral end, not the controller end.
- The amount of exposed screen inside the casing must be kept to a minimum to reduce radiating length. The lengths of unscreened wire inside the casing must also be kept to an absolute minimum.
- Where possible, cable lengths should be at least 2 metres, allowing induced static to dissipate before it reaches the controller.

Configuration options

Inputs

- 1 or 2 readers - either TDSi infra-red (Microcard), proximity or magnetic stripe. Various reader with keypad options are also available.
- Egress
- Door sense (single reader installations only)

Outputs

- Relay 1: lock strike relay 1 (2A 30V DC change-over)
- Relay 2: lock strike relay 2/auxiliary relay (2A 30V DC change-over)
- Relay 3: onboard bleeper (no external connections)

Relay 2 (in single reader configuration) and relay 3 can be programmed for different uses, such as “Door Forced” or “Alarm Shunt”. Note that some of these options require a door sensor to be fitted.

Connections

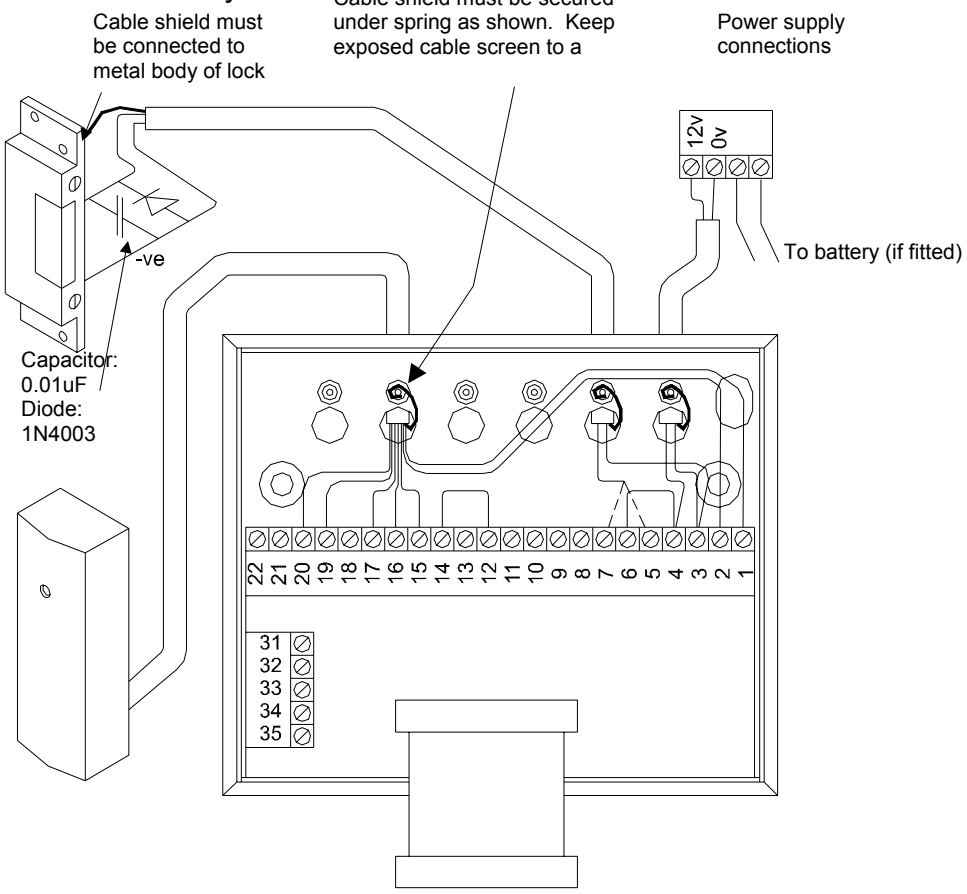
Pin	*Label*	*Designation*
1/3	0v	0v
2/4	12v	12v DC
5	R1no	Relay 1 Normally Open
6	R1c	Relay 1 Common
7	R1nc	Relay 1 Normally Closed
8	R2no	Relay 2 Normally Open
9	R2c	Relay 2 Common
10	R2nc	Relay 2 Normally Closed
11	R1MDat	Reader 1 Mag data
12	EG2/DS	Reader 2 Egress/Reader 1 Door Sense input
13	EG1	Reader 1 Egress input
14	0v	0v
15	R2MDat	Reader 2 Mag data

Pin	Label	Designation
16	R2MClk	Reader 2 Mag clock
17	R1MClk	Reader 1 Mag clock
18	R2LED	Reader 2 Indicator LED
19	R1LED	Reader 1 Indicator LED
20	5v	5v DC
21	0v	0v
22	Gnd	Chassis earth
31	0v	0v
32	Tx	Transmit
33	Rx	Receive
34	Rts	Request to Send
35	Cts	Clear to Send

Reader and Lock Strike Connections

Microcard or Proximity Reader

The following connections are required to connect the lock strike and a Microcard or a TDSi Proximity reader.



Reader Connections			***Lock Connections***		**Power**	
	Reader 1	***Reader 2***	-ve	1/3 (0v)	0v	1/3 (0v)
Black	1/3 (0v)	1/3 (0v)	+ve	5 (R1no) (power to release)	12v	2/4 (12v)
Red	2/4 (12v)	2/4 (12v)		7 (R1nc) (power to lock)		
Yellow	11 (R1Mdat)	15 (R2Mdat)	Link 4 (12v) to 6 (R1common)			
White	17 (R1MClk)	16 (R2MClk)				
Blue	19 (R1LED)	18 (R2LED)				
Green	20 (5v)	20 (5v)				

Note: Microcard readers

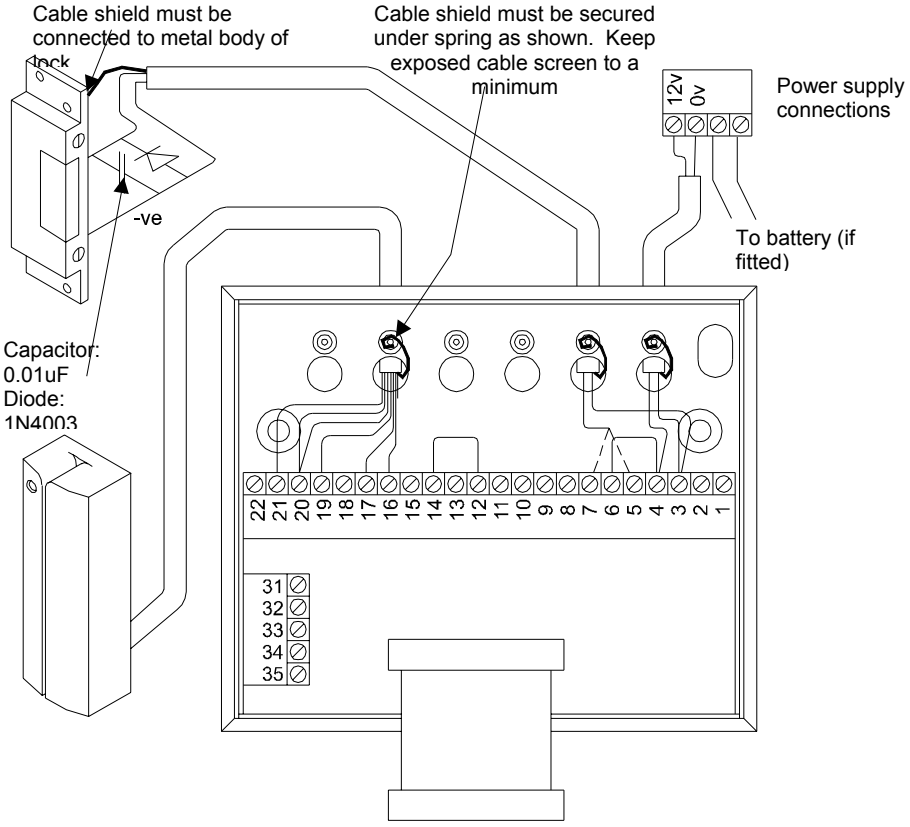
Connect the reader's Brown and Violet wires together, and do not connect the Orange wire.

Note - single reader configuration:

If a door sensor is not being used, a loop is required between pins 12 (DS) and 14 (0V).

Magnetic Reader

The following connections are required to connect the lock strike and a TDSi magnetic reader.



Reader Connections			***Lock Strike Connections***		***Power***	
	Reader 1	**Reader 2**	-ve	1/3 (0v)	0v	1/3 (0v)
Black	21 (0v)	21 (0v)	+ve	5 (R1no) (power to release)	12v	2/4 (12v)
Red	20 (5v)	20 (5v)		7 (R1nc) (power to lock)		
Yellow	11 (R1Mdat)	15 (R2Mdat)	Link 4 (12v) to 6 (R1common)			
White	17 (R1MClk)	16 (R2MClk)				
Blue	19 (LED)	18 (R2LED)				
Green	20 (5v)	20 (5v)				

Note - single reader configuration:

If a door sensor is not being used, a loop is required between pins 12 (DS) and 14 (0V).

Proximity Reader with Keypad and Display

The following connections are required to connect a TDSi Proximity reader with Keypad and Display:

Reader Connections	***Controller Connections***	
	Reader 1	***Reader 2***
1 – 0v IN	1 or 3 (0v)	1 or 3 (0v)
2 – 12v IN	2 or 4 (12v)	2 or 4 (12v)
4 – LCD COMMS IN	19 (R1LED)	18 (R2LED)
5 – 1K PULL UP link to 7 – MAG CLOCK		
6 – MAG DATA	11 (R1Mdat)	15 (R2Mdat)
7 – MAG CLOCK	17 (R1MClk)	16 (R2MClk)

Dataline Keypad with Display

The following connections are required to connect a TDSi Dataline Keypad with Display.

Reader Connections	***Controller Connections***	
	Reader 1	***Reader 2***
1 – 0v IN	1 or 3 (0v)	1 or 3 (0v)
2 – 12v IN	2 or 4 (12v)	2 or 4 (12v)
4 – LCD COMMS IN	19 (R1LED)	18 (R2LED)
5 – 1K PULL UP link to 7 – MAG CLOCK		

IR25/Prox25/Mag25 Upgrade Connections

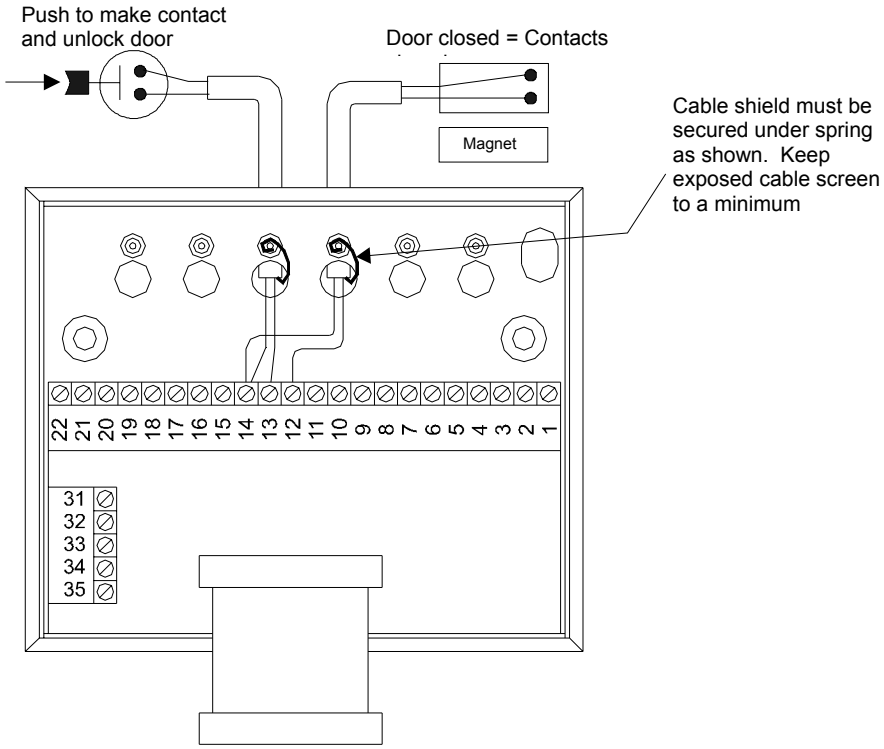
TDSi 25 Series stand-alone programmable readers provide a magnetic data output, providing an opportunity for system expansion by connection as a “dumb” reader to a 1000-Series controller.

The connections for these readers are as described for the Microcard/Proximity reader (see page 17) or Magnetic reader (see page 18).

Door Sensor and Egress Button Connections

The following connections are required to connect an egress button and door sensor.

Note, a door sensor input is only available for single reader installations.



Egress Button Connections			**Door Sense Connections**	
	Reader 1	**Reader 2**	-ve	14 (0v)
-ve	14 (0v)	14 (0v)	+ve	12 (DS)
+ve	13 (EG1)	12 (EG2)		

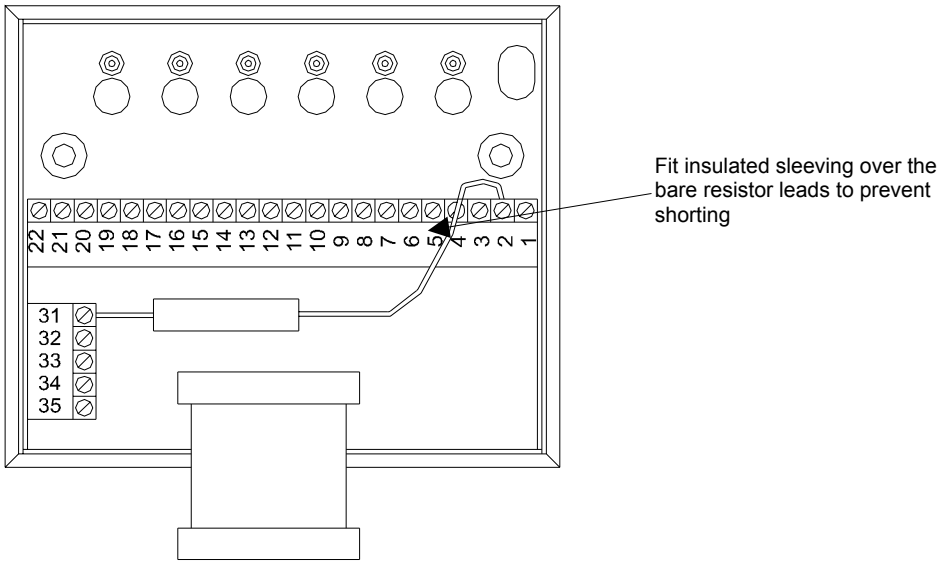
Anti-Tamper

A magnet is fitted in the front casing of the 1000-Series controller. This can be used to operate a Normally Open magnetic door sensor fitted behind the backplate (as shown on page 10), to provide an input to an existing alarm system in the event of the unit being levered from the wall or opened by an authorised person.

Heater

The following connections are required to connect a heater resistor inside the unit for low temperature operation. The heater should **only** be fitted where low temperatures are expected (less than 0ºC).

The heater should be positioned to the left of the casing between the ribbon connector and terminal strip so that the processor and memory chip will be heated when the front casing is fitted.



Note, it is important to fit a length of insulated sleeving over the bare leads to prevent shorting within the case.

Connections

The resistor should be fitted between 0v and +12v terminals.

Note

The heater will draw an additional 500mA from the power supply. In battery supported applications such a resistor could be driven from an independent AC or DC supply to avoid the extra load on the battery supported supply.

RS232 Printer Connection

The following connections are required to connect the 1000-Series controller to a printer. The RS232 interface provided allows connection to a **serial** printer, up to **15m** away.

There are three possible ways to connect a serial printer to the 1000-Series controller, depending on whether the printer has a “handshake”, and if so whether it is a hardware or software handshake.

Baud Rate, Parity and Flow Control parameters within the controller are all programmable, allowing compatibility with the majority of serial printers. The printer must support the ANSI character set.

Transmission Speed

Communication speed within the controller is configured using the Baud Rate feature (see page 44). The printer must be capable of one of the following baud rates:

300, 600, 1200, 2400, 4800, 9600, 19200, 38400

Handshake

The type of communications handshake used between the printer and controller is configured using the Flow Control feature (see page 45).

If the printer provides a hardware handshake, Flow Control should be set to CTS.

If the printer provides a software handshake, Flow Control should be set to XON/XOFF.

If the printer does not provide a communications handshake, select a baud rate which is **slower** than the printers printing speed in terms of characters per second. This will prevent the possibility of buffer-overflow, which will result in lost characters.

Hardware Handshake Connections

Controller			**Printer**
31	0v	0v	Signal Ground
32	Tx	Transmit	Receive
33	Rx	Receive	No connection
34	RTS	Request to Send	No connection
35	CTS	Clear to Send	Handshake (normally RTS)

Software Handshake Connections

Controller			**Printer**
31	0v	0v	Signal Ground
32	Tx	Transmit	Receive
33	Rx	Receive	Transmit
34	RTS	Request to Send	No connection
35	CTS	Clear to Send	No connection

No Handshake Connections

Controller			**Printer**
31	0v	0v	Signal Ground
32	Tx	Transmit	Receive
33	Rx	Receive	No connection
34	RTS	Request to Send	No connection
35	CTS	Clear to Send	No connection

Features and Facilities

Number of Readers

The 1000-Series controller can be used with either one or two readers. It is possible to control either a single door, a single door with in and out readers or two independent doors.

The number of readers controlled is set up using the Doors feature (see page 43), which defaults to a single door configuration.

IDs

Up to 1000 id's can be stored within the memory of the controller. These can be either 8 digit card numbers, 4 digit PINs or a combination of both. It is also possible to assign a 4 digit PIN to a card for Card + PIN operation if required.

Cards numbers are added to and deleted from the memory of the unit using the Add ID and Delete ID features (see page 28). PINs are added and deleted using the Add PIN and Delete PIN features (see page 30).

Groups

The 1000-Series controller allows IDs to be allocated to any of the 4 groups, which can be programmed to restrict or allow access through the door at different times of day. Different rules can apply on different days of the week to allow, for example, only authorised personnel access out of hours or at weekends.

When adding id's using the Add ID or Add PIN features, you are given the opportunity to assign each ID to any of the four groups. Group access times are then configured by setting up Time Control Lines (TCL's) using the Group Times feature (see page 39). The TCL's define the days of the week and times access for each group is allowed and restricted. A maximum of 4 TCL's per group are available.

Access Modes

The 1000-Series controller can be configured to allow access via one or a combination of the following modes:

- Card only
- PIN only
- Card + PIN

By default, the unit will allow Card only access. To be able to use PIN only and/or Card + PIN modes as well, use the PIN Only and Card + PIN features (see page 33) to turn these modes on.

It is also possible to define certain modes as being required at certain times of day, for example Card + PIN out of regular working hours. This can be set up using the Mode Times feature (see page 41).

Relay Control and Alarms

The 1000-Series controller has 3 relay outputs available:

- Relay 1: Lock release relay 1
- Relay 2: Auxiliary relay (1 reader configuration)/Lock release relay 2 (2 reader configuration)
- Relay 3: Bleeper

Relay 2 (dependent on the number of readers) and Relay 3 can be programmed using the Relay Use feature (see page 36) to be triggered in the occurrence of one of the following event types:

- Door Ajar
- Door Forced
- Duress
- 4th Wrong PIN (Card + PIN mode)
- Access Denied

Relay 2 can also be configured to provide an Alarm Shunt function (i.e. to temporarily bypass door sense contacts on an intruder alarm system when access is granted by a card/PIN).

Note Relay 2 is only programmable in single reader configuration, i.e. when it is used as an auxiliary relay and not as a lock strike relay for reader 2.

Additionally, relays can also be manually set into a specific state (i.e. On or Off) using the Control Relay feature (see page 36), or configured to automatically operate at certain times of/days of the week by using the Relay Times feature (see page 38).

Communications

The 1000-Series controller provides an RS232 serial output, allowing connection to a printer. An audit of the last 910 events will be stored in memory, including ID number, event type and time. These will be printed automatically when a printer is connected.

Programming

Powering Up

On initial power up, or after a reset, the display will show the following:

```
00:00   01/01/96
!DEFINE MASTER!
```

At this point, either a Master PIN (4-digit) or Master Card can be defined, which will subsequently allow access to the Master programming menu.

Master PIN

If you choose to use a Master PIN, type a 4-digit number on the keypad. Do this TWICE to confirm. When a key is pressed the LCD should illuminate and a short beep heard. The display will then change to:

```
IDs        #=Quit
0 Add ID
```

Important! You must remember the Master PIN. There is no means of "reminding" yourself if you forget it!

Master Card

To define a card as a Master Card, register a card in the reader. The unit will auto-align to the appropriate reader technology at this point, so it may be necessary to swipe/present (in the case of proximity) the card 2 or 3 times. The display will then change to:

```
IDs        #=Quit
0 Add ID
```

Important! The Master Card must be kept in a safe and secure place!

Changing Master PIN/Master Card

The **`Master Key`** feature (**`Utils`** menu, 4) will allow the Master PIN or Master Card to be redefined at a later date if required. See page 45 for further details.

Master Mode

Master Mode allows the 1000-Series controller to be programmed.

To enter Master Mode, enter the Master PIN or Master Card. The display shows:

```
IDs        #=Quit
0 Add ID
```

There are 3 menus within Master Mode:

- **IDs** – Add/Delete cards/PINs, block validate/void, card/PIN mode control
- **ACU** – Door timings, relay controls and time group settings
- **Utils** – Communications settings, printouts, master and time settings, resets

The options available within each menu repeatedly scroll around on the lower half of the display, showing which functions are available and identifying the number to be pressed to select a particular function.

#=Quit and ***=Next** alternates in the top right hand corner of the display, denoting the functions of the [#] and [*] keys.

Press the [*] key to scroll between the **IDs**, **ACU** and **Utils** menus.

Pressing the [#] key from within a function (e.g. **Add IDs**) quits the current function and causes the menu to step back one stage (to the IDs main menu). Pressing the [#] key again quits Master Mode completely.

If no key is pressed for 30 seconds the unit will timeout, automatically quitting Master Mode.

Master Menu Map

IDs	ACU	UTILS
0. Add ID	0. Lock Time	0. Baud Rate
1. Delete ID	1. Door Ajar Time	1. Parity
2. Add PIN	2. Control Relay	2. Flow Control
3. Delete PIN	3. Relay Use	3. Unit Number
4. Add ID Block	4. Control Group	4. Master Key
5. Delete ID Block	5. Relay Times	5. Print Id's
6. PIN Only	6. Group Times	6. Print Set up
7. Card + PIN	7. Mode Times	7. Time
	8. Language	8. Date
	9. Doors	9. Resets

Validating the first card

- Type in the Master PIN or swipe the Master card to enter Master Mode
- From the **ID's** menu, select **0 Add ID's**
- Type in the card number on the keypad
- Press the [*] key to validate the number.
- When prompted with **Card Type**, press the [*] key to select **Access**

- When prompted with **Groups**, press the * key again (the card will not be assigned to any groups and will therefore have unrestricted access)
- When prompted with **Doors**, press the * key to select **Doors 1&2**

For more information on adding cards, see page 28.

IDs Menu

0	**Add ID**	Add a Card number into the memory of the controller
1	**Delete ID**	Delete a Card number from the memory of the controller
2	**Add PIN**	Add a 4 digit PIN into the memory of the controller
3	**Delete PIN**	Delete a PIN from the memory of the controller
4	**Add ID Block**	Add a block of card numbers to the memory of the controller
5	**Delete ID Block**	Delete a block of card numbers from the memory of the controller
6	**PIN Only**	PIN only function On/Off
7	**Card + PIN**	Card + PIN function On/Off

0 – Add ID

This feature allows card numbers to be added into the memory of the controller to create access or validation cards. This feature allows the ID to be to be allocated to one of the four time control groups. A maximum of 1000 IDs (cards and/or PINs) can be stored in the units memory.

From the **IDs** menu, press [0]. The display then shows:

```
Add ID
Number:
```

Type the 8 digit card number on the keypad

If you make a mistake while entering a number, press the [*] key to scroll backwards.

Press the [*] key to validate the number or [#] to exit without validating a number.

Once the card has been validated, the display shows:

```
Card Type
Access
```

Press the [1] or [7] buttons on the keypad to scroll between the available options:

- **Access** Cards used by cardholders to gain access to controlled areas.
- **Validation** Cards providing a supervisor function to quickly validate a large number of Access cards. See overleaf for further details.

A "!" character in the top right hand corner of the display denotes that the option has been changed from the original setting. Press the [*] key to confirm the setting.

The display shows:

```
Add ID
Groups
```

ID's can be added into any of the four groups, each of which can be set up to grant or deny access at different combinations of times of day/days of the week. Group time schedules are configured using the **Group Times** feature, (see page 39 for further details). An ID can be assigned to more than one group.

Type in the group number(s) you wish the ID to be allocated to - 1, 2, 3 and/or 4 - and press the [*] key. If no groups are selected, the ID will be valid with no time restriction. The display then shows:

```
Add ID
Doors 1&2
```

Select the readers in which the card will be valid.

Use the [1] or [7] buttons on the keypad to scroll through the available options:

- **Doors 1&2**
- **Door 1**
- **Door2**

A "!" character in the top right hand corner of the display denotes that the option has been changed from the original setting. Press the [*] key to confirm the setting.

Card + PIN

Where Card+PIN access is required, the user allocates their own PIN the first time they use their card. For information on Card + PIN mode, see page 33.

Validation Cards

Validation cards provide access to a supervisor function that enables several user cards to be validated quickly.

Any number of validation cards may be created. The Group and Door attributes set when making a validation card effectively create a template for the user cards it can be used to validate. For example, if a validation card is created for Group 1, Door 1, user cards it validates will only be granted Group 1 access rights through Door 1.

Note, a validation card may only be used at the reader(s) for which it is defined.

Presenting/swiping a validation card causes the reader LED to stop flashing and the display to show:

```
15:37    31/7/00
12345678  Master
```

Cards may now be validated for the defined groups and doors by presenting/swiping them through the reader. Display shows:

```
15:37    31/7/00
12345678      OK
```

Presenting the validation card again exits the Master mode and the reader LED starts flashing again (note that the Validate card number and word Master remain on the LCD until the next event occurs).

In a 2 door scenario, when a validation card is being used at one reader the other reader continues to operate normally.

1 – Delete ID

This feature allows card numbers to be deleted from the controller's memory.

From the **IDs** menu, press [1]. The display then shows:

```
Del ID
Number:
```

Type in the 8 digit number of the card you wish to void. If you make a mistake while entering the number, press the [*] key to scroll backwards. Press the * key to delete the card.

2 – Add PIN

This feature allows PIN Only IDs to be added into the memory of the controller.

From the **IDs** menu, press [2]. The display then shows:

```
Add PIN
Number:
```

Type the 4-digit PIN on the keypad

If you make a mistake while entering a number, press the [*] key to scroll backwards.

Press the [*] key to validate the number or [#] to exit without validating a number.

Once the PIN has been validated, the display shows:

```
Add PIN
Groups:
```

ID's can be added into any of 4 groups, each of which can be set up to be granted or denied access at different combinations of times of day/days of the week. Group time schedules are configured using the Group Times feature, (see page 39 for further details). A PIN can be assigned to more than one group.

Type in the group number(s) you wish the PIN to be allocated to – 1,2,3 and/or 4 – and press the [*] key. If no groups are selected, the PIN will be valid with no time restriction.

The display then shows:

```
Add PIN
Doors 1&2
```

Select the readers in which the card will be valid.

Use the [1] or [7] buttons on the keypad to scroll through the available options:

- **Doors 1&2**
- **Door 1**
- **Door2**

A "!" character in the top right hand corner of the display denotes that the option has been changed from the original setting. Press the * key to confirm the setting.

Note – for PIN Only access, **PIN Only** mode must be set to **ON**. See page 32 for further details.

3 – Delete PIN

This feature allows PINs to be deleted from the memory of the controller.

From the **IDs** menu, press [3]. The display then shows:

```
Del PIN
Number:
```

Type in the 4 digit PIN you wish to void. If you make a mistake while entering the number, press the * key to scroll backwards. Press the * key to delete the card.

4 – Add ID Block

This feature allows a block of sequential ID numbers to be added.

From the **IDs** menu, press 4. The display then shows:

```
Add ID block
From:
```

Enter the 8 digit ID number of the first ID in the block to be validated and press the * key. The display then shows:

```
Add: 12345678
to:
```

Enter the 8 digit ID number of the last ID in the block to be validated and press the * key.

Note that a maximum of 1000 ID numbers can be stored in the controllers memory.

The display then shows:

```
Add: 12345678
Groups:
```

ID numbers can be added into any of 4 groups, each of which can be set up to be granted or denied access at different combinations of times of day/days of the week. Group time schedules are configured using the **Group Times** feature, (see page 39 for further details). An ID can be assigned to more than one group.

Type in the group number(s) you wish the ID to be allocated to – 1,2,3 and/or 4 – and press the * key. If no groups are selected, the ID will be valid with no time restriction.

The display then shows:

```
Add: 12345678
Doors 1&2:
```

Select the readers in which the card will be valid.

Use the 1 or 7 keys on the keypad to scroll through the available options:

- **Doors 1&2**
- **Door 1**
- **Door2**

A "!" character in the top right hand corner of the display denotes that the option has been changed from the original setting. Press the * key to confirm the setting.

Depending on the number of IDs added, block validation may take several minutes, during which time normal access control operations are suspended. During validation, the display indicates activity by showing a flashing cursor in the bottom right hand corner.

5- Delete ID Block

This function allows a block of sequentially numbered IDs to be voided from the memory of the controller.

From the **IDs** menu, press 5. The display then shows:

```
Del ID block
From:
```

Enter the 8 digit ID number of the first ID in the block to be deleted and press the * key. The display then shows:

```
Del 12345678
to:
```

Enter the 8 digit ID number of the last ID in the block to be deleted and press the * key.

Depending on the number of IDs to be deleted, block voiding may take several minutes, during which time normal access control operations are suspended.

6 – PIN Only

This feature allows PIN Only mode to be activated/deactivated.

From the **IDs** menu, press 6. The display then shows:

```
PIN-Only
Door 1
```

Select the reader for which PIN Only is to be defined. Press the 1 or 7 buttons to scroll through the available options:

- **Door 1**
- **Door 2**

A "!" character at the top right hand corner of the display denotes that the option has been changed from the original setting. Press the * key to select the displayed setting or # to exit without changing the setting.

The display then shows:

```
PIN-Only
Off
```

In order for access to be granted for PINs added using the **Add PIN** feature (see page 30), **PIN Only** must be set to **ON**.

Press the 1 or 7 buttons on the keypad to scroll between the available options:

- **ON**
- **OFF**

```
PIN-Only        !
On
```

A "!" character displayed in the top right hand corner of the display denotes that the option has been changed from the original setting. Press the * key to select the displayed setting or # to exit without changing the setting.

Wrong PIN

If a user makes a mistake while typing in their PIN when attempting to gain access through the door, pressing the [*] key will cancel the entry and the PIN can be entered again.

The unit can be configured to trigger an alarm if 4 incorrect pins are entered. See the **Relay Use** feature on page 36 for further details.

Timed Mode Control

It is possible to allow/disallow PIN Only access at different times of the day/week if required. This is achieved using the Mode Times feature. See page 41 for further details.

7 – Card+PIN

This feature allows Card + PIN mode to be activated/deactivated.

From the **IDs** menu, press [7]. The display then shows:

```
Card+PIN
Door1
```

Select the reader for which Card+PIN is to be enabled. Press the [1] or [7] buttons to scroll through the available options (Door 1/Door 2).

A "!" character at the top right hand corner of the display denotes that the option has been changed from the original setting. Press the [*] key to select the displayed setting or [#] to exit without changing the setting.

The display then shows:

```
Card+PIN
Off
```

In order for IDs to be associated with a PIN, **Card+PIN** must be configured to **ON**.

Press the [1] or [7] buttons on the keypad to scroll between the available options:

- **ON**
- **OFF**

```
Card+PIN        !
On
```

A "!" character displayed in the top right hand corner of the display denotes that the option has been changed from the original setting. Press the * key to select the displayed setting or [#] to exit.

Once Card + PIN mode is activated, users must define their own 4-digit PIN the next time their card is used. This is stored within the memory of the unit and becomes their PIN from then on.

Changing PIN

If the PIN is forgotten or needs to be changed, revalidate the card using the **Add ID** function. The display will show:

```
Add ID
Already Valid
```

This will reset the PIN, allowing the user to redefine their PIN the next time their card is used.

Duress

If the card holder enters a PIN one digit higher than their stored PIN, access will still be granted, but the duress alarm (if in use) will be triggered.

Wrong PIN

If a user makes a mistake while typing in their PIN when attempting to gain access through the door, pressing the * key will cancel the entry and the PIN can be entered again.

The unit can be configured to trigger an alarm if 4 incorrect pins are entered. See the **Relay Use** feature on page 36 for further details.

Timed Mode Control

It is possible to enforce Card + PIN access for added security at different times of the day/week if required. This is achieved using the **Mode Times** feature. See page 41 for further details.

0	**Lock Time**	Configures the length of time the lock release relay will be energised
1	**Door Ajar Time**	Configures the length of time the door may stay open before the Door Ajar alarm is triggered
2	**Control Relay**	Allows the status of the control relays to be configured
3	**Relay Use**	Allows the function of each relay (inc buzzer) to be configured
4	**Control Group**	Allows manual control of a groups access rights
5	**Relay Times**	Allows relays (inc. buzzer) to be programmed to automatically turn on or off at certain times of day/days of the week
6	**Group Times**	Allows the controller to be programmed to automatically allow or deny access to different groups of people at certain times of day/days of the week
7	**Mode Times**	Allows the access mode (e.g. Card + PIN) to be automatically configured at certain times of day/days of the week
8	**Language**	Configures the display language
9	**Doors**	Configures the number of readers

0 – Lock Time

This feature configures the length of time the lock release relay (relay 1) will be energised for following a valid access event. Such events will include:

- Presentation of a valid card (if card only is allowed)
- Entering a valid PIN (if PIN Only is allowed)
- A valid Card+PIN entry (if Card + PIN mode is activated)
- The Egress button is pressed (if fitted)

From the **ACU** menu press [0]. The display then shows:

```
Lock Time 05
New
```

Using the keypad, enter a 2-digit lock time in the range of 01 to 99 seconds. Press the [*] key to confirm the new setting or the [#] key to cancel without making any changes.

Door Sensor

If a door sensor is fitted, the lock release relay will be de-energised if the door is opened before the Lock Time has expired. This increases security as the door is locked again as soon as it closes behind somebody, eliminating the possibility of unauthorised access being gained while the lock relay is still energised.

Timed Control

It is possible to program the lock release relay to automatically lock or unlock the door at certain times of day. This is covered by the **Relay Times** feature (see page 38).

1 – Door Ajar Time

This feature allows the length of time the door may be open before the "Door Ajar" alarm is triggered to be set.

The door ajar alarm is triggered if the door is left open longer than the door ajar time. To use the door ajar alarm feature, a door sensor must be fitted and one of the relays must be configured to trigger a door ajar alarm event.

From the **ACU** menu press [1]. The display then shows:

```
Ajar time 05
New:
```

Using the keypad, enter a 2-digit door ajar time in the range of 01 to 99 minutes.

Press the [*] key to confirm the new setting or [#] key to cancel without making any changes.

Door Ajar Alarm

In the event of a door ajar alarm, the following will be shown on the display:

```
12:35   17/05/99
Door Ajar
```

The same message will also be sent to the printer (if connected) see page 24.

It is possible to configure either relay 2 or 3 (the buzzer) to be triggered in the event of a door ajar alarm using the **Relay Use** feature (see page 36).

2 – Control Relay

This feature allows the status of the relays 1, 2 and 3 to be configured, where:

- Relay 1 is the door 1 lock release relay
- Relay 2 is the door 2 lock release relay/auxiliary relay
- Relay 3 is the bleeper

From the **ACU** menu press [2]. The display then shows:

```
Control Relay
Which relay
```

Type the number of the required relay on the keypad – 1, 2 or 3. Press the [*] key to confirm. The display then shows:

```
Relay 1
Normal
```

Use the [1] or [7] buttons to scroll through the available options:

- **Normal** – allows the relay to be controlled by the usual ACU, card, PIN and time functions
- **On** or **Off** – holds the relay in that state.

A "!" character displayed in the top right hand corner of the display denotes that the option has been changed from the original setting. Press the [*] key to confirm the new setting or [#] key to cancel without making any changes.

3 – Relay Use

This feature enables the function of relays 2 and 3 to be defined, where:

- Relay 2 is the auxiliary relay (i.e. the controller is set to 1 Door mode, see page 43).
- Relay 3 is the bleeper

Note - It is not possible to change the function of relay 1, (the lock release relay), or relay 2 when the controller is set to 2 door mode. It is not possible to connect anything to relay 3 (the buzzer).

From the **ACU** menu press [3]. The display then shows:

```
Relay Use
Which Relay
```

Using the keypad, enter the required relay number, 2 or 3. Press the [*] key to confirm. The display then shows:

```
Relay 2
Alarm Shunt
```

or:

```
Relay 3
Door Ajar
```

Use the [1] key to scroll up or the [7] key to scroll down through the available options and select an event type to trigger the relay:

- **Alarm Shunt** (Default setting for Relay 2)
- **Door Ajar** (Default setting for Relay 3, the buzzer)
- **Door Forced**
- **Duress**
- **Access Denied**
- **4th Wrong PIN**

A "!" character displayed in the top right hand corner of the display denotes that the option has been changed from the original setting. Press the [*] key confirms the new setting meaning the relay will be energised each time the selected event type occurs. Press the [#] key to cancel without making any changes.

4 – Control Group

The 1000-Series controller allows ID's to be allocated to one of 4 groups, each of which can be set up to be granted or denied access at different times of day. This is configured using Time Control Lines (TCL's) and are set up using the **Group Times** feature (see page 39).

The **Control Group** feature allows the status of a time control group to be manually modified on a temporary basis, normally for the purpose of giving members of a particular group temporary access through a door outside of the hours/days defined by the time control lines.

From the **ACU** menu press [4]. The display then shows:

```
Control Group
Which group
```

Using the keypad, enter the required group number, 1, 2, 3 or 4. Press the [*] key to confirm. The display then shows:

```
Group 1
Barred
```

Use the [1] key to scroll up or the [7] key to scroll down through the available options:

- **Barred** Denies access for members of the selected group
- **Free** Allows access for members of the selected group

A "!" character displayed in the top right hand corner of the display denotes that the option has been changed from the original setting. Press the [*] key to confirm the new setting or [#] key to cancel without making any changes.

Note, settings selected under this feature are not permanently toggled. They will be over-ridden by the next appropriate time control function.

5 – Relay Times

This feature allows the relays to be programmed to automatically turn on or off at certain times of day. This is programmed using Time Control Lines (TCL's), which are compromised of the following information:

- Days(s) of the week the control is effective
- Time of day the control is effective
- Action (i.e. On or Off)

Up to 4 TCLs can be programmed for each relay.

Important

A single TCL will only instruct the relay EITHER to turn on OR to turn off. Normally TCLs are programmed in PAIRS – one to turn the relay on and one to turn it off again.

Note

In 2 door configuration, TCLs set in the 1000-Series controller are effective for BOTH readers.

From the **ACU** menu press [5]. The display then shows:

```
Relay times
Which relay
```

Using the keypad, enter the required relay number, 1, 2, or 3. Press the [*] key to confirm. The display then shows:

```
Relay 1 time 1
Unused:
```

Use the [1] key to scroll up or the [7] key to scroll down through the 4 time control lines. Press the [*] key to select a TCL to program.

The display shows:

```
Relay 1 time 1
Days:
```

Using the keypad, enter the days of the week on which the operation is to take place (Monday = 1, Tuesday = 2 etc.). Up to 7 days can be entered. Press the [*] key to confirm. The display shows:

```
Relay 1 time 1
Time
```

Using the keypad, enter the time at which the operation is to take place. The time must be in 24 hour format (hhmm). Press the [*] key to confirm. The display shows:

```
Relay 1 time 1
Normal
```

Use the [1] key to scroll up or the [7] key to scroll down through the available options:

- **Normal** Default, allows normal operation of the relay
- **On** Latches the relay on
- **Off** Latches the relay off (i.e. Relay 1 – Access Denied)
- **Pulse** The action depends on the chosen relay:
  Relay 1: turns relay on for the Lock Time
  Relay 2: turns relay on for 1 second
  Relay 3: sounds bleeper for 50ms

A "!" character displayed in the top right hand corner of the display denotes that the option has been changed from the original setting. Press the [*] key to confirm the new settings. The display will show a summary of the time control settings, for example:

```
Relay 1 time 1
1234--- 18.00+
```

Where:

1234---	Days of the week selected for the operation to occur: 1=Monday 2=Tuesday 3=Wednesday 4=Thursday 5=Friday 6=Saturday 7=Sunday
18.00	The time selected for the operation to occur, in 24 hour format
+	The operation that occurs: + = On - = Off n = normal p = pulse

Press the [*] key to confirm the new setting or [#] key to cancel without making any changes.

6 – Group Times

This feature allows the controller to be programmed to automatically allow or deny access to different groups at certain times of day/days of the week. This is programmed using Time Control Lines (TCL's), which are compromised of the following information:

- Days(s) of the week the control is effective

- Time of day the control is effective
- Action (i.e. On or Off)

Up to 4 TCL's can be programmed for each group.

Important

A single TCL will only EITHER allow access OR deny access to a single group. Normally TCL's are programmed in PAIRS – one to allow access and one to deny access again.

Note

In 2 door configuration, TCL's set in the 1000-Series controller are effective for BOTH readers.

From the **ACU** menu press [6]. The display then shows:

```
Group times
Which group
```

Using the keypad, enter the required group number, 1, 2, 3 or 4. Press the [*] key to confirm. The display then shows:

```
Group 1 time 1
Unused:
```

Use the [1] key to scroll up or the [7] key to scroll down through the four time control lines. Press the [*] key to select a TCL to program. The display shows:

```
Group 1 time 1
Days:
```

Using the keypad, enter the days of the week on which the operation is to take place (Monday = 1, Tuesday = 2 etc.). Up to 7 days can be entered. Press the [*] key to confirm. The display shows:

```
Group 1 time 1
Time
```

Using the keypad, enter the time at which the operation is to take place. The time must be in 24 hour format (hhmm). Press the [*] key to confirm. The display shows:

```
Group 1 time 1
ON
```

Use the [1] key to scroll up or the [7] key to scroll down through the available options:

- **On** Allows access
- **Off** Denies access

A "!" character displayed in the top right hand corner of the display denotes that the option has been changed from the original setting. Press the [*] key to confirm the new settings. The display will show a summary of the time control settings, for example:

Where:

1234---	Days of the week selected for the operation to occur: 1=Monday 2=Tuesday

	3=Wednesday 4=Thursday 5=Friday 6=Saturday 7=Sunday
18.00	The time selected for the operation to occur, in 24 hour format
+	The operation that occurs: + = On (access allowed) - = Off (access denied)

Press the * key to confirm the new setting or # key to cancel without making any changes.

7 – Mode Times

This feature allows the access mode (e.g. Card + PIN) to be automatically configured at certain times of day/days of the week. This is programmed using Time Control Lines (TCL's), which are compromised of the following information:

- Days(s) of the week the control is effective
- Time of day the control is effective
- Action (i.e. On or Off)

Up to 4 TCL's can be programmed for each mode.

Important

A single TCL will only turn a mode EITHER on OR off. Normally TCL's are programmed in PAIRS – one to enable the mode and one to disable it again.

Note

In 2 door configuration, TCL's set in the 1000-Series controller are effective for BOTH readers.

From the **ACU** menu press 7. The display then shows:

```
Mode times
Card+PIN
```

Use the 1 key to scroll up or the 7 key to scroll down through the mode options:

- **Card + PIN**
- **Pin Only**

Press the * key to confirm the selection.

The display shows (depending on the mode option selected):

```
Card+PIN 1
Unused:
```

Use the 1 key to scroll up or the 7 key to scroll down through the four time control lines. Press the * key to select a TCL to program. The display shows:

```
Card+PIN 1
Days:
```

Using the keypad, enter the days of the week on which the operation is to take place (Monday = 1, Tuesday = 2 etc.). Up to 7 days can be entered. Press the [*] key to confirm. The display shows:

```
Card+PIN 1
Time:
```

Using the keypad, enter the time at which the operation is to take place. The time must be in 24 hour format (hhmm). Press the [*] key to confirm. The display shows:

```
Card+PIN 1
ON:
```

Use the [1] key to scroll up or the [7] key to scroll down through the available options:

- **On** Mode on
- **Off** Mode off

A "!" character displayed in the top right hand corner of the display denotes that the option has been changed from the original setting. Press the [*] key to confirm the new settings. The display will show a summary of the time control settings, for example:

```
Card+PIN 1
1234--- 18:00+
```

Where:

1234---	Days of the week selected for the operation to occur: 1=Monday 2=Tuesday 3=Wednesday 4=Thursday 5=Friday 6=Saturday 7=Sunday
18.00	The time selected for the operation to occur, in 24 hour format
+	The operation that occurs: + = On - = Off

Press the * key to confirm the new setting or # key to cancel without making any changes.

8 – Language

This feature allows the display language to be set.

From the **ACU** menu, press [8]. The display then shows:

```
Language
English
```

To change the display language press the [1] or [7] buttons to scroll through the available options:

- **English**
- **Deutsch**

- **Francais**
- **Espanol**
- **Nederlands**
- **Svenska**
- **Dansk**

A "!" character displayed in the top right hand corner of the display denotes that the option has been changed from the original setting. Press the [*] key to confirm the new settings or the [#] key to cancel without making any changes.

9 – Doors

This feature configures the number of readers the unit controls.

From the **ACU** menu, press [9]. The display then shows:

```
Doors
2 Doors
```

To change the number of doors, press the [1] or [7] buttons to scroll through the available options:

- **2 Doors**
- **1Door**

A "!" character displayed in the top right hand corner of the display denotes that the option has been changed from the original setting. Press the [*] key to confirm the new settings or the [#] key to cancel without making any changes.

Note, if the 2 Doors option is selected, relay 2 can no longer be programmed as an auxiliary relay. Where the 1 Door option is selected, the Doors setting is not displayed in features such as **Add ID** (see page 28), etc.

Utils Menu

0	**Baud Rate**	Configures the baud rate setting for printer communications
1	**Parity**	Configures the parity setting for printer communications
2	**Flow Control**	Configures the flow control setting for printer communications
3	**Unit Number**	Sets the unit ID number
4	**Master Key**	Allows the master PIN or card to be changed
5	**Print ID's**	Provides a print out of card numbers and PINs stored within the memory of the unit
6	**Print Set up**	Provides a print out of the unit configuration
7	**Time**	Set time
8	**Date**	Set date
9	**Resets**	Allows id's, TCL's or entire system to be reset

0 – Baud Rate

This feature allows the communications speed to be set for communication with a printer. The baud rate of the 1000-Series controller must be set to the same baud rate as the printer connected.

From the **Utils** menu press [0]. The display then shows:

```
Baud Rate
9600
```

Use the [1] key to scroll up or the [7] key to scroll down through the options available:

- **300**
- **600**
- **1200**
- **2400**
- **4800**
- **9600**
- **19200**
- **38400**

A "!" character displayed in the top right hand corner of the display denotes that the option has been changed from the original setting. Press the [*] key to confirm the new setting.

1 – Parity

From the **Utils** menu press [1]. The display then shows:

```
Parity
No Parity
```

Use the [1] key to scroll up or the [7] key to scroll down through the options available:

- **No Parity**
- **Even Parity**

- **Odd Parity**

A "!" character displayed in the top right hand corner of the display denotes that the option has been changed from the original setting. Press the [*] key to confirm the new setting or [#] key to cancel without making any changes.

2 – Flow Control

From the **Utils** menu press [2]. The display then shows:

```
Flow Control
None
```

Use the [1] key to scroll up or the [7] key to scroll down through the options available:

- **None**
- **CTS**
- **XONOFF**
- **CTS+XONOFF**

A "!" character displayed in the top right hand corner of the display denotes that the option has been changed from the original setting. Press the [*] key to confirm the new setting or [#] key to cancel without making any changes.

3 – Unit Number

This feature allows an individual unit number to set within each 1000-Series controller on your site. The unit number is printed at the top of all printed reports.

From the **Utils** menu press [3]. The display then shows:

```
Unit number 01
New:
```

Use the keypad to type in a new 2 digit unit number. A value of 01 to 99 can be entered. Press the [*] key to confirm the new setting or [#] key to cancel without making any changes.

4 – Master Key

This feature allows the Master PIN or Card number to be changed.

From the **Utils** menu press [4]. The display then shows:

```
Master Key
New:
```

If the unit was originally set up to use a Master PIN, using the keypad type in the new 4 digit Master PIN. Press the [*] key to confirm.

If the unit was originally set up to use a Master Card, using the keypad type in the new 8 digit Master Card number. Press the [*] key to confirm.

The display shows:

```
Master Key
New:
```

Re-enter the new Master PIN/Card number to confirm it was typed in correctly. Press the [*] key to confirm the new setting or [#] key to cancel without making any changes.

If you wish to change from a Master PIN to a Master Card, the unit must be reset. This will reset all IDs and PINs.

5 – Print IDs

This feature prints a list off all current IDs, their time group and PIN status.

PINs associated with Card + PIN mode are NOT printed for security reasons.

From the **Utils** menu press [5]. The display then shows:

```
Print IDs
Printing
```

The report is automatically printed (if the printer is connected and switched on).

6 – Print Setup

This feature prints a configuration report of settings within the controller.

From the **Utils** menu press [6]. The display then shows:

```
Print Setup
Printing
```

The report is automatically printed (if the printer is connected and switched on).

7 – Time

This feature allows the clock to be set to the correct time.

From the **Utils** menu press [7]. The display then shows:

```
Time 00:23:58
New:
```

Using the keypad, type in the new time in 6 digit, 24 hour clock format (hhmmss). Press the [*] key to confirm the new setting or [#] key to cancel without making any changes.

8 – Date

This feature allows the date to be changed.

From the **Utils** menu press [8]. The display then shows:

```
Date 17/05/99
New:
```

Using the keypad, type in the new date in 6 digit, European date format (ddmmyy). Press the [*] key to confirm the new setting or [#] key to cancel without making any changes.

9 – Resets

This feature allows the IDs or Time Control Lines (TCL's) to be reset, or the entire unit to be restored to factory default settings.

From the **Utils** menu press [9]. The display then shows:

```
Resets
Reset IDs
```

Use the [1] key to scroll up or the [7] key to scroll down through the available options:

- **Reset IDs** Removes all card and PINs from the controllers memory
- **Reset TCL's** Resets all time control lines for relays, groups and modes
- **SYSTEM RESET** Resets unit to factory default settings (and deletes all ID's)

Press the [*] key to select the displayed option. The display then shows:

```
Reset IDs
Are you sure
```

Press the [*] key to confirm. Press the [#] key to abort.

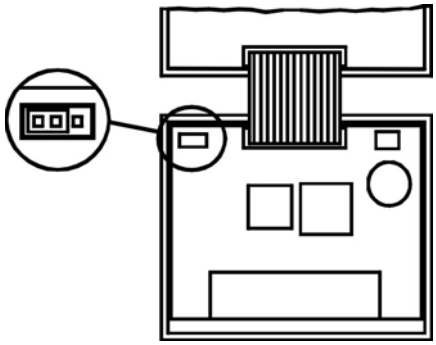
Printing Events

The 1000-Series controller provides an RS232 serial output, allowing connection to a printer. An audit of the last 910 events is stored in memory, including ID number, event type and time. These will be printed automatically when a printer is connected.

Hardware Reset

If you forget the Master PIN/lose the Master Card or the unit cannot be reset from the menu system, it is possible to reset the unit manually.

Remove the cover of the unit (as described on page 9). With the ribbon cable attached to both front and rear casing, locate the reset jumper on the inside of the front casing as shown below:



With the power connected, remove the jumper and momentarily connect across the middle and right hand pins. The unit will beep. Replace the jumper in its original position.

The display shows:

```
  SYSTEM RESET
#=YES       *=NO
```

Press the [#] key to reset the unit. Press the [*] key to abort.

Note, the functions of these keys are reversed from normal for this operation!

Battery Jumper

The memory of the unit **cannot** be reset by removing the battery jumper. The battery is used to back up the clock function only. The memory of the 1000-Series controller is stored in eeprom and does not therefore require battery backup.

Trouble Shooting

Display Messages

The following describes the various messages reported by the display (and printer if connected).

Door Events

Display Message	**Description**
`Door Opened`	The door is open
`Door Closed`	The door is closed
`Door Forced`	The door has been opened without a valid card swipe, PIN entry or egress input
`Door Ajar`	The door has been left open
`Egress On`	The lock has been released as a result of the egress button being pressed
`Egress Off`	The lock has been locked again following the egress button being pressed

Potential problems

- *Door Opened/Closed/Forced/Ajar messages are not displayed*

Solution

There is no door sensor fitted.

- *The wrong message is displayed when the door is opened/closed (e.g. Door Opened is displayed when the door is closed).*
- *When a valid card is swiped/the egress button is pressed, the lock is only released for a split second.*

Solution

The door sensor fitted is the wrong polarity. Replace the door sensor with a Normally Open type.

ID Events

Display Message	Description
`Granted`	Access granted (preceded by card/PIN number)
`Denied`	Access denied (preceded by card/PIN number) – card/PIN not
`Misread`	Card could not be read properly
`Pin timeout`	Card + PIN mode is on and a card was swiped but no PIN entered
`?group`	IDs in this group not valid at current time (preceded by card/PIN number)
`4thpin`	Card + PIN mode is on and a card was swiped. Four incorrect PINs entered
`Barred`	Group(s) barred at current time (preceded by group number)
`Blocked`	The card/PIN used is currently on the blocked list
`****`	Displayed when a PIN is entered

Potential problems

- *The card has been validated in the controller but does not open the door when swiped through the reader*

Possible causes:

Depending on the message displayed the problem could be:

- Power supply to lock has failed (listen for click from relay inside controller)
- The reader is faulty
- Out of time zone (the event is not valid at the current time as a result of the TCL settings)
- Waiting for a PIN entry (denoted by rapid flashing LED on reader)
- Wrong PIN entered
- Lock relay latched off

Communications

Potential Problems

- *When printing, the printer stops after printing a few lines*

Solution

The printer is suffering buffer overflow. This is because the communications handshake is not configured correctly. Refer to page 22 for details of how to configure the communications handshake. If the printer you have does not provide a handshake, reduce the communications speed (see Baud Rate, page 44 for further details).

- *When the printer is switched off/off-line, the keypad display freeze and Master Mode cannot be entered*

Solution

The communications handshake between the controller and the printer cannot be performed. While the printer is off, it will be necessary to reset the Flow Control back to None (see page 45). To do this you will first have to reset the communications handshake status:

If Flow Control is set to CTS (hardware handshake) short between the RTS and CTS connections (pins 34 and 35, see page 22).

If Flow Control is set to XON/XOFF (software handshake) power down the unit and repower again.

This will free up the keypad and display and allow the Flow Control setting to be reset via the menu system.

Readers

I am using a traditional square TDSi reader with a 1000-Series controller. The LED only shows red for invalid card swipes and does nothing for valid card swipes.

Solution

The 1000-Series has been designed for use with the new range of TDSi readers. These utilise bi-coloured LEDs to indicate green for access granted and red for access denied. Standard traditional square TDSi readers do not have this capability and can therefore only indicate when access is denied.

The solution is to change the reader either for a new style “long” Microcard reader or alternatively a traditional square reader with bi-coloured LED (p/n 5002-0035).

Compliance and Safety Notices

Compliance with EC Regulations CE

The TDSi ACU1000 conforms to the EC EMC Directive - 89/336/EEC, and the Low Voltage Directive 73/23/EEC as amended by 93/68/EC.

Test results show the product meet the requirements of the following EMC specifications when installed as a system according to TDSi installation instructions:

EMC Emissions: EC Spec. EN55022-1994, Level B - General Use

EMC Immunity: EC Spec. EN55024-1998

The equipment meets the requirements of the Low Voltage Directive by compliance with the safety specification for IT Equipment - EN 60950.

Limitations on the intended operating environment.

The product is intended for use in access control and revenue control applications in a wide range of configurations. They are intended for use with third party equipment attached at the power supply input, the reader inputs, various control outputs and the data communications port. Such third party equipment, and all cabling must be of suitable design and installation to ensure that the overall system complies with the requirements of the EC EMC directive.

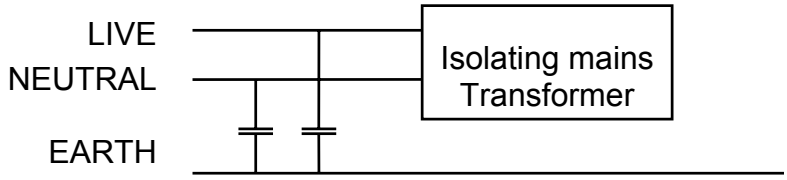
The equipment is intended to be driven from a fully approved, mains powered 10-14v DC, regulated power supply with suppression components fitted as described below. The connection from the PSU to the Prox 200 equipment to be made with screended cable connected to earth at the PSU.

Guidance notes for the installation and use of TDSi equipment must be strictly followed. Due to the wide range of product configurations TDSi notes cannot cover all possible types and combinations of equipment that may be assembled to form a total system.

TDSi exercise due diligence to ensure that its equipment is suitable for use in the stated applications, but ultimate responsibility for the compliance of a complete system must rest with the prime contractor at a site where local conditions may require additional EMC precautions to be taken.

Mains Transformer Suppression Requirements

To comply with EMC requirements, an ACU1000 should be driven from an isolated, mains driven power supply, the mains supply input to the isolating transformer must be fitted with 470 pF, Class Y mains suppression capacitors. These should be connected from line to earth and from neutral to earth as shown below.



FCC Regulations Notice

This equipment complies with the requirements in part 15J FCC for a Class A computing device. Operation of this equipment in residential areas may cause unacceptable interference to radio and television reception requiring the operator to take whatever steps are necessary to correct the interference.

CSA EMC Notice

This digital apparatus does not exceed the Class B Limits for radio frequency emissions from digital apparatus set out in the radio interference regulations of the Canadian Department of Communications.

Le present appareil numerique n'emet pas de bruits radioelectriques depassant les limites applicable aux appareils numeriques de la Class B prescrites dans les reglement sur le brouillage radioelectrique edicte par le Ministere des Communications du Canada.

Safety Notice

Low Voltage 10 - 14v DC operation

Product description

These notes apply to TDSi ACU1000 Access Control Units with or without associated token readers. The ACU1000 units should be powered from a fully approved, external, isolated, mains powered, fused, overload protected, 10 - 14v DC supply, with or without battery support.

Rating

The TDSi ACU1000 Access Control Unit is designed to operate from a 10 - 14v DC power supply and draw a maximum current of 400mA, excluding additional reader, lock strike and sensor loads.

Safety

These products are designed to comply with the provisions of the international standard EN 60950 which covers safety of IT equipment.

WARNING: Disconnect the mains supply from any associated equipment before removing the covers or making connections to the equipment.

All regulations and requirements MUST be must strictly followed to prevent hazards to life and property both during and after installation, and during any subsequent servicing and maintenance.

It is essential to comply with the local wiring regulations and to use mains cable appropriate for use in that installation.

The electrical installation of the equipment must include convenient means to isolate the equipment from mains supply.

Siting and fixing of equipment

The equipment may be installed indoors, out of doors, or in damp or exposed conditions provided it is carefully installed and sealed to the manufacturer's instructions.

To ensure mechanical stability the equipment must be secured using appropriate fasteners or brackets to a wall, pillar or other part of the building structure, or to associated stable equipment.

The equipment must not be sited near to sources of excessive heat. It is designed for use in ambient temperatures ranging from -20ºC to 55ºC, but a heating element should be fitted for operation below 0ºC.

Connecting a low voltage DC supply to the equipment

Always use a fully approved mains power supply to provide the 10-14v DC supply to the ACU1000 equipment. Install the power supply in accordance to the manufacturer's instructions. The 10-14v DC supply must be connected to the equipment using a screened cable with the braid earthed correctly at both ends.

Fit TDSi recommended suppression capacitors to the mains supply input of the PSU.

Ensure that the ACU1000 chassis is connected to a solid system earth point.

Connecting signal wiring to associated equipment

The TDSi ACU1000 Control Unit when powered from an external low voltage 10 - 14v DC supply must be connected to other equipment forming part of an overall control system using 10-14v DC supply and signal wiring connections made with screened cable with the screen securely connected to an earth point at the controlled equipment end and at earth points within the ACU1000 equipment. Where individual remote equipment is locally earthed it is permissible to disconnect the cable screen earth connection at one end of the cable.

Internal fuse rating

There are no replaceable fuses fitted with the ACU1000 equipment. The mains driven power supply to which the unit is connected should be suitably fused for the application according to the supplier's instructions.

Lithium battery

Caution!

Danger of explosion if battery is incorrectly replaced.

ACU1000 is fitted with a non-replaceable Lithium Battery. Do not attempt to replace the battery.

In case of battery failure replace complete PCB assembly.

Dispose of pcb assembly according to the manufacturers instructions.