



# Dataline Keypad

*With optional reader and display*

## Installer and User Guide

This page intentionally blank

# Notices

---

## *Manufacturer's details*

---

This product is designed and manufactured by:

TDSi Ltd.,  
Sentinel House  
Nuffield Road  
Poole,  
Dorset BH17 0RE  
England

Telephone: + 44 (0)1202 666222  
Fax: + 44 (0)1202 679730  
E-mail: [info@tdsi.co.uk](mailto:info@tdsi.co.uk)  
Web site: [www.tdsi.co.uk](http://www.tdsi.co.uk)

---

## *Copyright notice*

---

Copyright © 2003 Time and Data Systems International Ltd., Poole. All rights reserved.

This document, and any software supplied with it, may not be reproduced in any form or by any means in whole or in part without prior written consent of the copyright owners.

Patents granted in the UK, USA and principle countries of the world. Some of all of the following patents may apply:

435119 (USA)

417624 (Canada)

8226014, 8425238, 8326874 (UK)

Other patents granted and pending worldwide.

---

## *Policy*

---

Time and Data Systems has a policy to continuously improve its products and reserves the right to change specifications, colours or prices of its products without prior notice.

---

## *Limitation of liability*

---

The information in this document is provided for information purposes only, and, unless otherwise agreed, forms no part of any contract between you and TDSi. Whilst care has been taken to ensure that the information contained is reasonably complete and correct at the time of publication, TDSi accepts no liability for any errors or omissions which it may contain. Your use of this document is conditional on this limitation of liability.

# Table of Contents

<b>NOTICES.....</b>	<b>3</b>
<b>TABLE OF CONTENTS.....</b>	<b>4</b>
<b>INTRODUCTION.....</b>	<b>5</b>
<b>INSTALLATION .....</b>	<b>6</b>
<b>COMPLIANCE NOTICES - 1.....</b>	<b>10</b>
<b>COMPLIANCE NOTICES - 2.....</b>	<b>12</b>
<b>SAFETY NOTICES: LOW VOLTAGE 10 - 14V DC OPERATION.....</b>	<b>13</b>

# Introduction

## ***Dataline Keypad Models***

The Dataline Keypad is available with optional integral proximity reader and/or 2-line display. Note that where no Proximity reader is built-in, an external reader may be connected.

The table below shows all of the possible configurations and which models of TDSi access control units are compatible:

<b>Part Number</b>	<b>Keypad</b>	<b>Proximity Reader</b>	<b>Display</b>	<b>X-Series compatible</b>
5002-1281	•	•	•	•
5002-1283	•		•	•

## ***Technical Specification***

Operating Temp	-10°C to +50°C
Humidity	Water resistant (suitable for external installation in sheltered location)
Dimensions (mm)	120 x 100 x 30
Operating Frequency	125 KHz

## ***Cable distances***

### **Keypad to ACU**

Screened multicore cable – 7/0.2mm. To reduce voltage drop in the 0v line a number of cores are wired together for the 0v connection.

Up to 60m use 6-core cables with 2 cores for 0v

Up to 120m use 8-core cable with 4 cores for 0v

# Installation

---

## *Important Installation Notes*

---

### **Choosing a suitable location for installation**

In order to achieve maximum card reading range, proximity readers should be mounted in a location away from sources of electrical noise, such as computer monitors, TV sets, mains wires and other proximity readers. Note also that any nearby metal will result in a reduction in card read range.

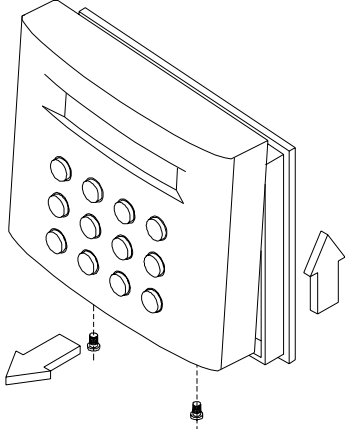
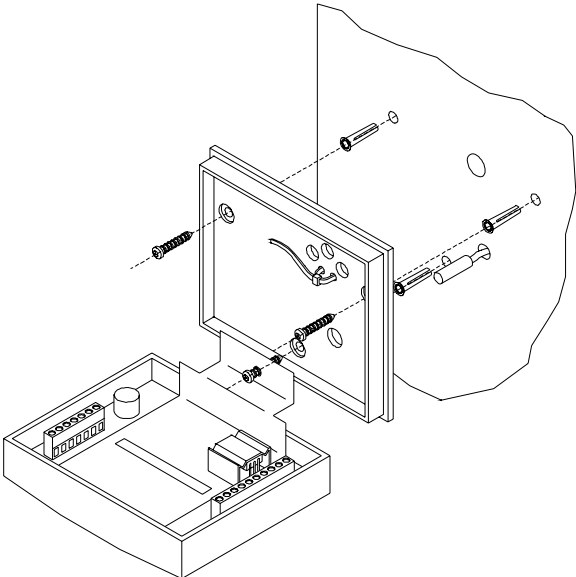
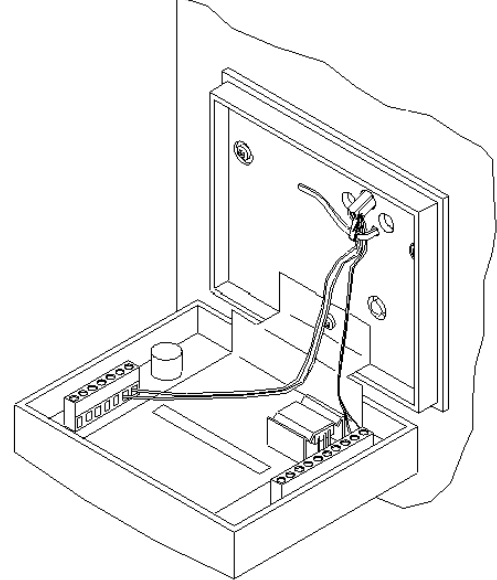
Before choosing a location, it is good practice to connect the reader and test for acceptable read range.

In order to comply with CE EMC regulations, TDSi proximity readers should be installed at least **1m** apart.

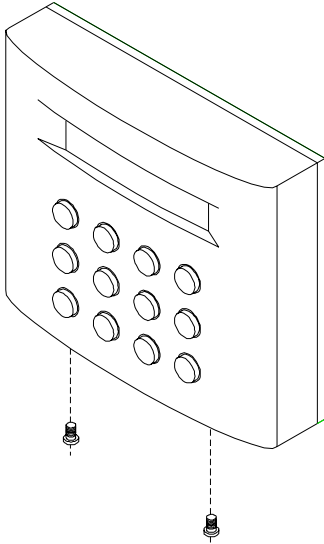
### **Guidance on cabling**

- It is essential that only screened cables are allowed to enter the Dataline Keypad casing.
- The shield of each cable must be grounded at one end only. 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.

## Mounting and Assembly

1.		<ul style="list-style-type: none"><li>• Remove the two securing screws from the underside of the unit.</li><li>• Pull the bottom of the plastic casing forward and lift the cover up and away from the backplate.</li></ul>
2.		<ul style="list-style-type: none"><li>• Drill three 5.5mm diameter holes, for wall plugs.</li><li>• Drill holes as required for cable(s)</li><li>• Screw unit to mounting surface, attaching main casing to backplate as illustrated, using a screw through the hinge/label and backplate.</li><li>• Fit cable tie to backplate. <b>DO NOT</b> fully tighten.</li></ul>
3.		<ul style="list-style-type: none"><li>• Feed cable(s) through backplate and connect to terminals as appropriate. Twist cable braids together, secure with crimp provided and feed behind cable tie.</li><li>• <b>Note!</b> Ensure cables are routed inside the unit such that they will not come into direct contact with heat sink when unit is in operation.</li><li>• Tighten cable tie; ensure braids are firmly secured together.</li></ul>

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***

### **Connections – Keypad to ACU**

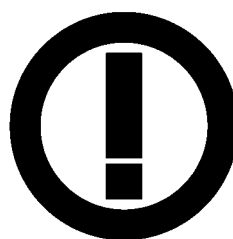
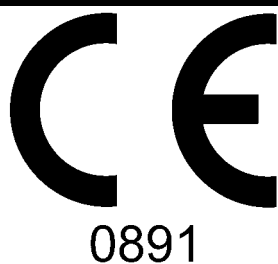
<b>Pin</b>	<b>Designation</b>	<b>X-series Door 1</b>	<b>X-Series Door 2</b>
1	0V	29	43
2	12V DC	30	30
3	No connection		
4	Display data	26	40
5	1k Pull-up to Pin 7		
6	Mag Data	24	38
7	Mag Clock	25	39
8	No connection		
9	No connection		
10	External Reader Indicator LED – no connection if no external reader	28	42

### **Connections – Reader to Keypad**

Note: Pin 7, 10 and 6 on the keypad have connections to BOTH the ACU and the external reader

<b>Pin</b>	<b>Designation</b>	<b>IR (Microcard)</b>	<b>Digital IR, Proximity</b>	<b>Magnetic</b>
1	0V		Black	Black
2	12V DC		Red	
3	5V DC	Red, White, Green	Blue	Red, Blue
4	no connection			
5	1k Pull Up		Link to PIN 7	Link to PIN 7
6	Mag Data		Yellow	Yellow
7	Mag Clock	Yellow	White	White
8	IR Drive	Blue		
9	no connection			
10	Indicator LED	Black	Green	Green

## Compliance Notices - 1



### ***Compliance with CE regulations***

The equipment is designed, tested and declared to conform to the following CE directives:

- 89/336/EEC - EMC Directive
- 93/68/EC - Low Voltage Directive
- 1999/5/EC - R&TTE Directive

### ***Limitations on intended operating environment***

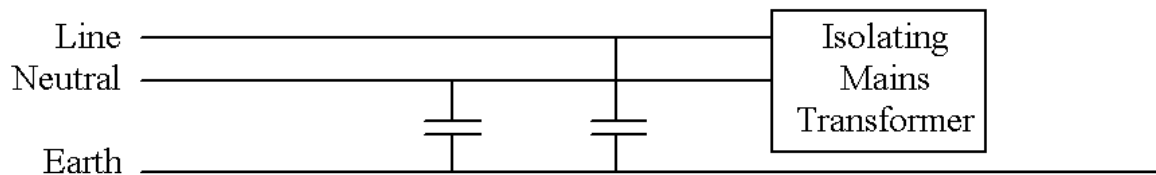
The equipment is intended for use in access control applications in a wide range of configurations. It is intended to control the use of third party equipment attached at the control interface. Such third party equipment and all cabling must be of suitable design and installation to ensure that the overall system complies with the requirements of the CE directives.

Guidance notes for the installation and use of TDSi equipment must be strictly followed. Due to the wide range of access control products TDSi cannot cover all possible type and combinations of equipment that may be assembled to form a total system. TDSi exercise due diligence to ensure that the 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 be taken.

### ***Power supply requirements.***

Note that any power supply used to drive this equipment must provide a smoothed DC voltage using a linear regulator. The power supply must NOT be of switched mode design. When used in security applications a battery backed-up power supply must be used to maintain operation during short power interruptions. Connections between the power supply and the equipment must be made using braided screen cable, of suitable power rating, with the braid screen connected to earth at the power supply.

To reduce interference TDSi recommend that the mains input to the power supply isolating transformer is fitted with 470pF, Class Y mains suppression capacitors. These should be connected from mains line to earth, and from mains neutral to earth.



---

***Special note on multiple proximity reader installations.***

---

To ensure compliance with CE EMC regulations, TDSi Proximity readers must be mounted at least 1m apart.

## Compliance Notices - 2

---

### ***FCC Regulations Notice .***

---

This device complies with Part 15, Class B, of the FCC Rules. Operation is subject to the following two conditions:-

- a) This device may not cause harmful interference.
- b) This device must accept any interference received, including interference that may cause undesired operation.

**WARNING:** Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the manufacturer's instructions, may cause interference harmful to radio communications.

There is no guarantee, however, that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

---

### ***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.

---

### ***Radio Frequency Allocation Notice***

---

Individual countries may have specific regulations on radio frequencies used by electronic equipment and purchasers are advised that it is their responsibility to ensure that equipment meets their local regulations. TDSi cannot be held responsible for consequences of any such breach and purchasers are therefore advised to check local regulations before installation.

## **Safety Notices:**

### **Low Voltage 10 - 14v DC operation**

---

#### ***Product description***

---

The equipment should be powered from a fully approved, external, isolated, mains powered, fused, overload protected, 10 - 14v DC supply, with battery support.

---

#### ***Rating***

---

The equipment is designed to operate from a 10 - 14v DC power supply and draw a maximum current of 200mA, excluding additional lock strike and sensor loads.

---

#### ***Safety***

---

The equipment is 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  $-10^{\circ}\text{C}$  to  $+50^{\circ}\text{C}$  (degrees Centigrade).

---

## ***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 equipment. Install the power supply in accordance to the manufacturer's instructions. The 10 - 14V DC supply must be connected to the equipment using screened cable with the braid earthed correctly at both ends. Fit TDSi recommended suppression capacitors to the mains supply input of the PSU.

---

## ***Connecting signal wiring to associated equipment.***

---

When the equipment is powered from an external low voltage 10 - 14V DC power supply it must be connected to other equipment forming part of an overall control system using supply and signal wiring connections made with screened cable with the screen securely connected to an earth point at the system power supply and at appropriate earth points within the system. 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 equipment. Any mains driven power supply to which the unit is connected should be suitably fused for the application according to the supplier's instructions.

This page intentionally blank

---

**EC DECLARATION OF CONFORMITY**

***Compliance with Radio & Telecommunications Terminal  
Equipment Regulations***

---



Date of issue: 25/6/2001  
Equipment Model Type: **TDSI 1280 SERIES PROXIMITY/KEYPAD READERS**  
Model variant part numbers 5002-1280/1/2  
Address: TDSi GROUP  
SENTINEL HOUSE, NUFFIELD RD POOLE,  
DORSET, BH17 ORE, UNITED KINGDOM

This is to certify that the aforementioned equipment fully conforms to the protection requirements of the following EC Council Directives on the approximation of the laws of the member states relating to:

<u>Applicable directives</u>	<u>Title</u>
1999/5/EC	Radio & Telecommunications Terminal Equipment Directive

Technical standards

EMC	EN-55022: 1994	Electromagnetic immunity
EMC	EN-50082-2:95 & EN-50130-4:1995	Electromagnetic immunity
LVD	EN60950	Safety of Information Technology Equipment
RTTE	ETSI EN 300 330-1:2001 (Equipment Class 3)	ERM; SRD; Radio equipment in the frequency range 9kHz to 25MHz and inductive loop systems in the frequency range 9kHz to 30MHz; Part 1: Technical characteristics & tests methods.

Signed on behalf of TDSi by:



Title: **P M Gater, Joint Managing Director.**

