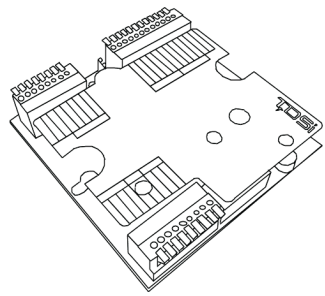




Quick Start Guide

SOLOgarde

Stand Alone Access Control System



NOTICES

Manufacturers Details

This product is designed and supplied by:
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1 OVERVIEW

Thank you for purchasing SOLOgarde, a stand alone door access control system. SOLOgarde comes with some innovative features that greatly simplify both the installation and use of the product.

The controller is contained within a single Printed Circuit Board Assembly (PCBA) and features:

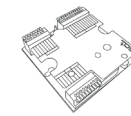
- A relay for controlling doors or signalling to other equipment
- Both Prox and Mifare reader technologies
- An on-board sounder
- Light Emitting Diodes (LEDs) for indication of activity, relay and alarm operation
- Jumper headers for enabling controller features
- Spring-loaded connection terminals
- Terminal label showing all connections to the controller.

The SOLOgarde hand-held programmer is a tool that is used to perform system maintenance and diagnostics. It is connected to the SOLOgarde system using the programming socket provided at the bottom of the SOLOgarde reader or on the Prox reader version in the USB Socket fitted in the ACU Surface Box.

Provided that it is installed correctly, SOLOgarde will provide many years of trouble-free operation. To ensure of this, please read and understand this manual fully. For full instructions on the installation, operation and programming of SOLOgarde, please refer to the SOLOgarde User Manual (UM0028), which is available for download from the TDSi website.

2 CONTROLLER KIT CONTENTS

Check that you have the following items. Please contact your supplier if any of the items are missing or damaged.



SOLOgarde control PCB (1 off)



Lock suppression diode (1 off)



Foam spacer (for electrical surface box mounting) (2 off)



Quick start Guide (1 off)

2.1 SOLOGARDE LAYOUT AND FEATURES

The following diagrams show the layout of the controller. Please familiarise yourself with the layout of the product before attempting installation and operation.

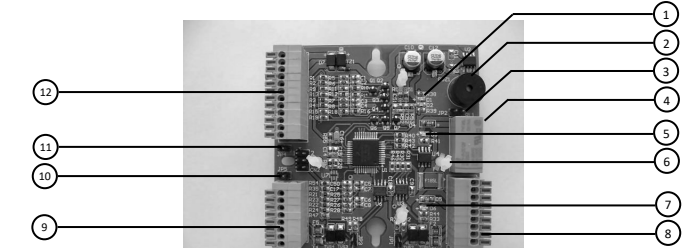


Figure 1 – SOLOgarde Control Unit (Terminal Label Removed for Clarity)

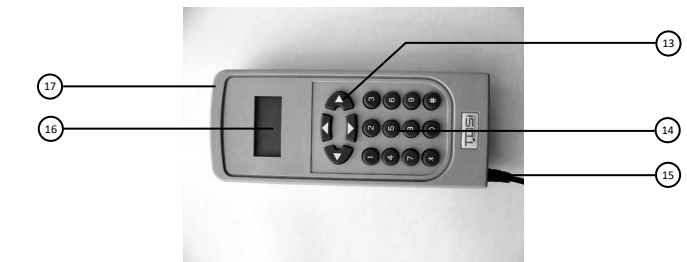


Figure 2 - SOLOgarde Hand-Held Programmer

- 1 Activity LEDs (Red and Green)
- 2 Sounder
- 3 Alarm Output Link (JP2)
- 4 Relay
- 5 Relay Active LED (Red and Green)
- 6 Terminal Label Mounting Post
- 7 Alarm LED (Green)
- 8 Spring-Loaded Terminal Block (Reader Communications, Relay and Alarm Connections)
- 9 Spring-Loaded Terminal Block (Door Sense, Egress and Tamper Connections)
- 10 Door Sense Bypass Link (JP5)
- 11 Reset Link (JP4)
- 12 Spring-Loaded Terminal Block (Power and Reader Connections)
- 13 Navigation Keys
- 14 Numeric Keypad
- 15 Connection Cable
- 16 Alpha-Numeric Display
- 17 On/Off Button

To Register your Product,
Visit <http://www.tdsi-product-registration.co.uk>

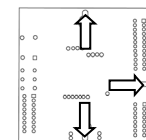
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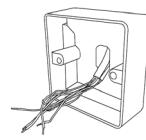
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Marketing Support: marketing@tdsi.co.uk
Technical Support: support@tdsi.co.uk

3 INSTALLING SOLOGARDE

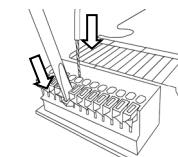
Note: A suppression diode MUST be fitted at the door lock. Failure to do so may result in permanent irreparable damage to the controller.



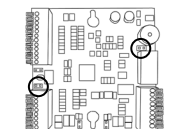
When mounting using self-adhesive feet, choose a suitable flat surface to mount the controller onto. Fit one foot to each of the three elongated slots in the underside of the controller board. Peel the liners from the feet and secure the controller board into the required position. Now route the reader, door and service cables to the SOLOgarde controller



When mounting in the ACU Surface Box mounting pass the cables either through the back or side of the box.

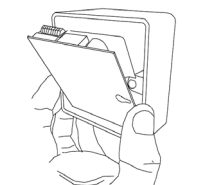


Prepare all wiring by stripping 10 mm of insulation from each conductor. Wire the controller, referring to the diagram shown in section 3.1. Use a suitable tool to fully depress the orange lever, insert the conductor and then release the lever. Check that the connection is secure by gently pulling on the conductor. It should be held very securely.

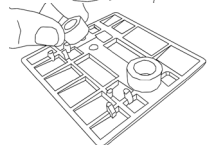


Fit the links according to the installation requirements

- Fit the **Sense** link (marked **JP5**) if a door sense is not being used. If the door sense is being used then leave the **Sense** link off.
- For positive alarm action (i.e. the Alarm output is to be taken to +12 V during an alarm condition) fit a jumper to the link marked **JP2**.

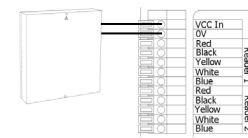


Fit the SOLOgarde controller into the ACU Surface Box so that the terminal label is facing down.



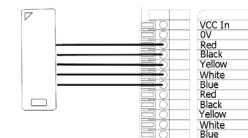
Peel the liners and fit the self-adhesive foam spacers to the rear face of the ACU Surface Box cover. Fit the cover and secure using the fixing screws provided with the cover.

3.1 WIRING INFORMATION



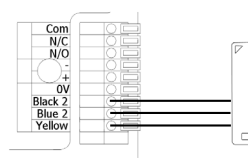
Power Supply

Wire a suitable power supply between the **VCC In** and **0V** terminals of the SOLOgarde controller.



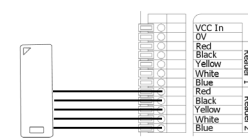
Reader (Read-In)

Wire the thicker 8-core SOLOgarde reader cable to the SOLOgarde controller terminal block marked **Reader 1** as shown opposite. If two readers are to be installed this is the reader that controls access from the unsecure area to the secure area. Note that the cable colours must match those shown on the terminal label.



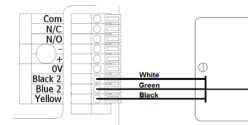
Mifare Reader (Read-In) Communications

Wire the thinner 3-core SOLOgarde reader cable to the SOLOgarde controller terminal block marked **Reader** as shown opposite. If two readers are to be installed this is the reader that controls access from the unsecure to the secure area. Note that the cable colours must match those shown on the terminal label. *Update: From April 2020 Cabling updates now require the red wire to be connected to Blue terminal.



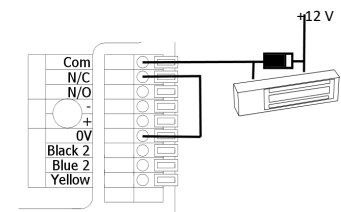
Second Reader (Read-Out)

Wire the thicker of the two SOLOgarde Reader cables to the SOLOgarde controller terminal block marked **Reader 2** as shown opposite. If two readers are to be installed this is the reader that controls access from the secure area to the unsecure area. Note that the cable colours must match those shown on the terminal label.



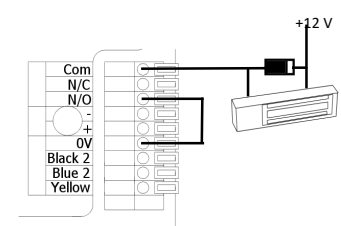
Prox Reader (Read-In) Communications

Wire the USB cable of the ACU Surface Box to the SOLOgarde controller terminal block marked **Reader** as shown opposite. Note that the cable colours will not match those shown on the terminal label. Note wire colours on diagram.



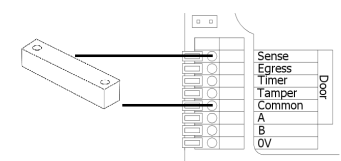
Door Lock – Fail Safe

Connect the door lock between the +12 V supply and the Com terminal. Link the 0V and N/C terminals. **Note: A suppression diode MUST be fitted at the door lock. Failure to do so may result in permanent irreparable damage to the controller.**



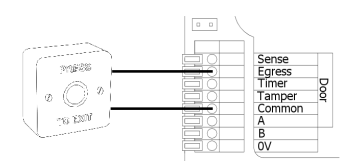
Door Lock – Fail Secure

Connect the door lock between the +12 V supply and the Com terminal. Link the 0V and N/O terminals. **Note: A suppression diode MUST be fitted at the door lock. Failure to do so may result in permanent irreparable damage to the controller.**



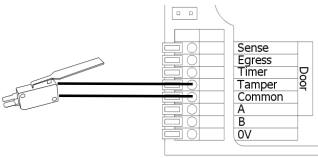
Door Sense

Wire a door contact (normally open type) between the **Sense** and **Common** terminals. Make sure that the Door Sense Bypass Link Jumper JP5 (circled) is not fitted.

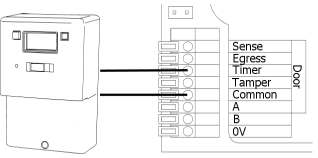


Request to Exit Button

If using the SOLOgarde in single reader mode, fit a Request to Exit button between the **Egress** and **Common** terminals.



Tamper
If a tamper switch is to be fitted, connect this between the **Tamper** and **Common** terminals.



Clock Timer Input
If the Time Zone feature of SOLOGarde is to be utilised, connect a timer between the **Timer** and **Common** terminals.

3.2 STARTING FOR THE FIRST TIME

- Perform a final check on all wiring to ensure that it is correct
- Refit the Terminal Label if this was removed during installation
- Apply power to the SOLOGarde controller
- Check that the green **Activity** LED is flashing showing that the controller is operational.
- Should the alarm be sounding (three successive beeps from the SOLOGarde controller sounder repeated every 2 seconds), check that the door is not open. The alarm will silence after a period of 30 seconds.
- Momentarily, press the Request to Exit button (or short-circuit the Egress input to 0V). Check that the door is released and the green **Relay** LED is lit while the relay is activated.
- After 5 seconds the green **Relay** LED extinguishes and the door is relocked.

SOLOGarde is now ready for programming and use. Please refer to the rest of this guide on how to do this.

4.5 CHANGING THE FUNCTION OF A CARD

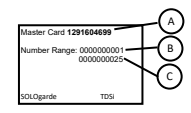
The function of a card can be changed using the SOLOGarde Hand-Held Programmer. Turn the Hand-Held Programmer on and connect it to the bottom of the SOLOGarde reader or on the Prox Reader version into the USB socket on the ACU Surface Box.

Card Keypad	Press the ▼ key until the Card option is highlighted (flashing). Press the * key to select it.
Edit Delete	Press the ▼ key until the Edit option is highlighted (flashing) and press the * key to select it.
Single Block	With the Single option selected, press the * key to select.
Number 00485525	Either enter the card number using the numeric keypad or simply present the card to be edited to the reader. The card number will automatically appear on the programmer display. Once the card number has been entered, press the * key to enter it.
Mode Time Grp	The programmer now displays a number of options that allow the properties of the card to be tailored. The first option is the card Mode . Press the * key to view and change the options for the card Mode . These are: <ul style="list-style-type: none"> Card (the default setting) where the user is required to present only a card in order to gain access Cr+PIN where the user is required to present their card followed by a Personal Identification Number (PIN) using the reader keypad.¹ Cr+Code where the user is required to present their card followed by a global code using the reader keypad.¹ Use the ▲ or ▼ keys to highlight your required card Mode and press the * key to select it.
Time Grp Type	The next option is the Time Group in which the user(s) are to be members of. Press the * key to view and change the options for the Time Group. <ul style="list-style-type: none"> TZ1 (the default setting). Members of the Time Zone 1 group are valid when the Time input is off (i.e. high or at +12 V). TZ2. Members of the Time Zone 2 group are valid when the Time input is on (i.e. low or at 0 V) TZ1 +TZ2. Members of the Time Zone 1 plus Time Zone 2 group are valid regardless of the state of the Time input. Use the ▲ or ▼ keys to highlight your required Time Group and press the * key to select it. The final option is the card Type . Press the * key to view and change the options for the card Type . <ul style="list-style-type: none"> Standard (the default setting). The lock time that has been set up in the controller will apply to this card. DDA. The lock time that will apply to the card will be double that of the lock time set in the controller, allowing more time for the person to pass through the door. Use the ▲ or ▼ keys to highlight your required card Type and press the * key to select it
Type Validate	

4 OPERATING SOLOGARDE

SOLOGarde can be programmed using either the Master Card supplied with SOLOGarde card packs (Mifare Reader only) or through use of the hand-held programmer. Prox Cards can only be added to the SOLOGarde using the hand-held programmer.

4.1 ADDING CARDS USING THE MASTER CARD (MIFARE READER ONLY)



Each SOLOGarde Card Pack is supplied with a Master Card, which contains information relating to the cards contained within that card pack. The Master Card shows the following information:

- A: The Serial Number of the Master Card. This allows easy identification of the Master Card at a later date
- B: The Start card number relating to this Master Card
- C: The End card number relating to this Master Card



To load the Card Pack

- simply present the Master Card supplied with the card pack to the reader
- The controller will emit a long bleep and the green LED on the reader will illuminate for 1 second.
- All of the cards contained within that Card Pack are automatically validated in the controller.

Once done the system is now ready to use and the cards can be distributed to the users.

4.2 ADDING MORE CARD PACKS

Once the first Master Card has been shown to the reader the controller records the details of this card. Further cards can be added to the system as follows. Access to both the original Master Card and the Master Card from the Card Pack that are to be added will be needed.

- Present the original Master Card to the SOLOGarde reader. The controller will emit two beeps and the red Activity LED will flash twice. The green LED on the reader will also start to flash indicating that Master Card from the new Card Pack can be presented.
- Present the Master Card from the new Card Pack. The controller will emit a long bleep and the green LED on the reader will illuminate for 1 second indicating that the cards from the second pack have been validated in the controller.
- The additional card pack is now ready for use.

Further card packs can be added in the same way, up to the maximum capacity of the controller.

4.6 THE SOLOGARDE ALARM FEATURE

The SOLOGarde system can produce an alarm under certain conditions. These are:

- If the door is forced
- The tamper input becomes active
- The input supply voltage is out-of-range
- A duress code has been entered at the keypad¹

¹ certain versions only
An alarm condition is signified by three short beeps from the SOLOGarde controller sounder together with flashing of the red **Activity** LED. Also, if the jumper is fitted to **JP2**, the alarm output will be activated and the green **Alarm** LED will be illuminated.

Additionally the red LED on the reader will flash at an increased rate. This will continue until the alarm has been cleared (reset) using the hand-held programmer allowing for easy identification of the controller that has experienced an alarm condition.

Note that if the SOLOGarde controller has Silent mode enabled (refer to section 4.7.1) the sounder on the SOLOGarde controller will not sound.

4.6.1 Alarm Output

SOLOGarde features a solid-state (transistor) alarm output to which an external alarm sounder can be connected. The output can either be taken to 0 V (leave jumper JP2 on the SOLOGarde controller board out) or driven to +12 V when jumper JP2 has been fitted.

4.6.2 Clearing an Alarm Condition

Use the Hand-Held Programmer to clear an Alarm Condition. Turn the Hand-Held Programmer on and connect it to the bottom of the SOLOGarde reader.

ACU Card	Ensure that the ACU menu option is highlighted (flashing) and press the * key to select it.
Reset Sys Info	Press the ▼ key to highlight Reset and press the * key to accept the selection.
Alarm ACU	With the Alarm option highlighted, press the * key reset the alarm.

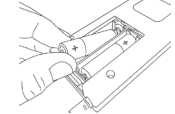
The alarm will now be silenced.

4.3 THE SOLOGARDE HAND-HELD PROGRAMMER

The SOLOGarde hand-held programmer is a tool that is used to perform system maintenance and diagnostics. It is connected to the SOLOGarde system using the programming socket provided at the bottom of the SOLOGarde reader.

Note: under no circumstances should any attempt be made to connect the SOLOGarde programmer to anything other than the programming socket on the bottom of the SOLOGarde reader. Irreparable damage could result to both the programmer and the equipment to which is connected.

4.3.1 Preparing the SOLOGarde Hand-Held Programmer for Operation

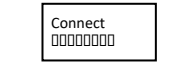


Turn the programmer over and locate the battery compartment at the bottom of the unit. Slide the battery cover open and insert 2 x AA batteries type MN1500/LR6 or equivalent (not supplied) into the compartment noting the correct polarity.

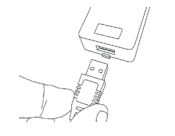
Refit the battery cover over the compartment and slide the cover into place until a click is heard. The programmer is now ready for use.



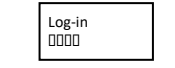
Turn the Hand-Held Programmer on. To do this, press and hold the button located on the top of the unit.



After a few seconds, the connection screen will be shown. The bar scrolling at the bottom of the screen indicates that it is waiting to be connected to the controller.



Connect the Hand-Held Programmer to the bottom of the SOLOGarde reader using the socket provided.



Once the SOLOGarde controller has been detected, the Log-In screen is now displayed, prompting for the 4-digit password for the controller to be entered. The default password is "1234". Once the password has been entered, press the * key. The Hand Held Programmer is now logged in to the SOLOGarde controller. If there is no activity on the Hand-Held Programmer for a period of 5 minutes, it will automatically switch off to conserve battery life.

Note: for security purposes, it is strongly advised to change this password to a secret one at the earliest opportunity.

Upon successfully logging-in to the controller the display shows the menu system. This can be navigated in one of two ways, either by using the navigation keys or using shortcuts through the numeric (0-9) keys or indeed a mixture of the two. The following sections explain the navigational aspects of the programmer menu.

4.7 CHANGING THE SOLOGARDE CONTROLLER FEATURES

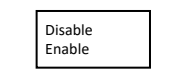
Several parameters of the controller can be changed using the SOLOGarde hand-held programmer. Switch on the Hand-Held Programmer and connect it to the bottom of the SOLOGarde reader. Access the ACU menu.

4.7.1 Silent Mode

The SOLOGarde controller features an on-board sounder. For certain applications, it may be preferred that the sounder does not operate. This can be achieved by setting the SOLOGarde controller into **Silent** mode.



Highlight the **Silent** menu option (flashing) and press the * key to select it.



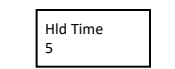
To enable **Silent** mode (i.e. to disable the on-board sounder) press the ▼ key to highlight **Enable** and press the * key to accept the selection.

4.7.2 Door Relay Hold Time

The SOLOGarde controller features a relay that can be used to control a door lock or signal to other equipment (such as an intruder panel). The default hold time of the lock 5 seconds, however it is adjustable from 1 to 60 seconds. For cards that have been added to the DDA group, the relay will be operated for a period of time double that of the standard lock time set.



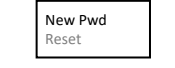
Press the ▼ key to highlight **Hld Time** (Hold Time) and press the * key to accept the selection.



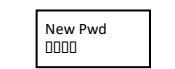
The Hold Time that is current set is now displayed. This can either be changed by using the ▲ or ▼ keys or by entering the numeric value required. Press the * key to accept the selection. The controller will emit a single bleep to indicate that the programming has been accepted.

4.7.3 Changing the Controller Password

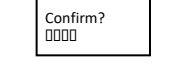
Each controller has a 4-digit password that has to be entered before the menu system can be accessed by the hand-held programmer. This is to prevent unauthorised modification of the system which in turn could compromise security. For convenience each controller is supplied from the factory with the default password of "1234".



Press the ▼ key to highlight **New Pwd** (New Password) and press the * key to accept the selection.



Enter the new 4-digit password. Use the numeric keys to input the password. Note that the password is masked (the numbers that you enter are replaced with "*" characters as you press the keys. Press the * key to enter the new password.



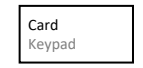
Re-enter the new password. Press the * key to enter the new password. The controller will emit a single bleep to indicate that the new password has been set in the controller.

4.4 DELETING CARDS

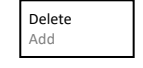
Cards are deleted from SOLOGarde using the hand-held programmer.



Turn the hand-held programmer on and connect it to the bottom of the reader or the USB connector on the ACU Surface Box.



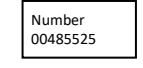
Press the ▼ key until the **Card** option is highlighted (flashing). Press the * key to select it.



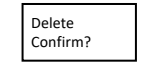
Press the ▼ key until the **Delete** option is highlighted (flashing) and press the * key to select it.



With the **Single** option selected, press the * key to select.



Either enter the card number to be deleted using the numeric keypad or simply present the card (if available) to be deleted to the reader. The card number will automatically appear on the programmer display. Once the card number has been entered, press the * key to enter it. Confirm to delete the cards by pressing the * key once again. The controller will emit a single bleep to indicate that deletion of the card has been successfully completed. Once the card has been deleted from the system **OK** is displayed. If the display shows **Invalid** then the card was not found in the memory and you are prompted to enter a valid card number.



4.8 THE SOLOGARDE HAND-HELD PROGRAMMER MENU STRUCTURE

