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Ins-30000 Net2 classic quickstart guide

Paxton Access

Technical Support

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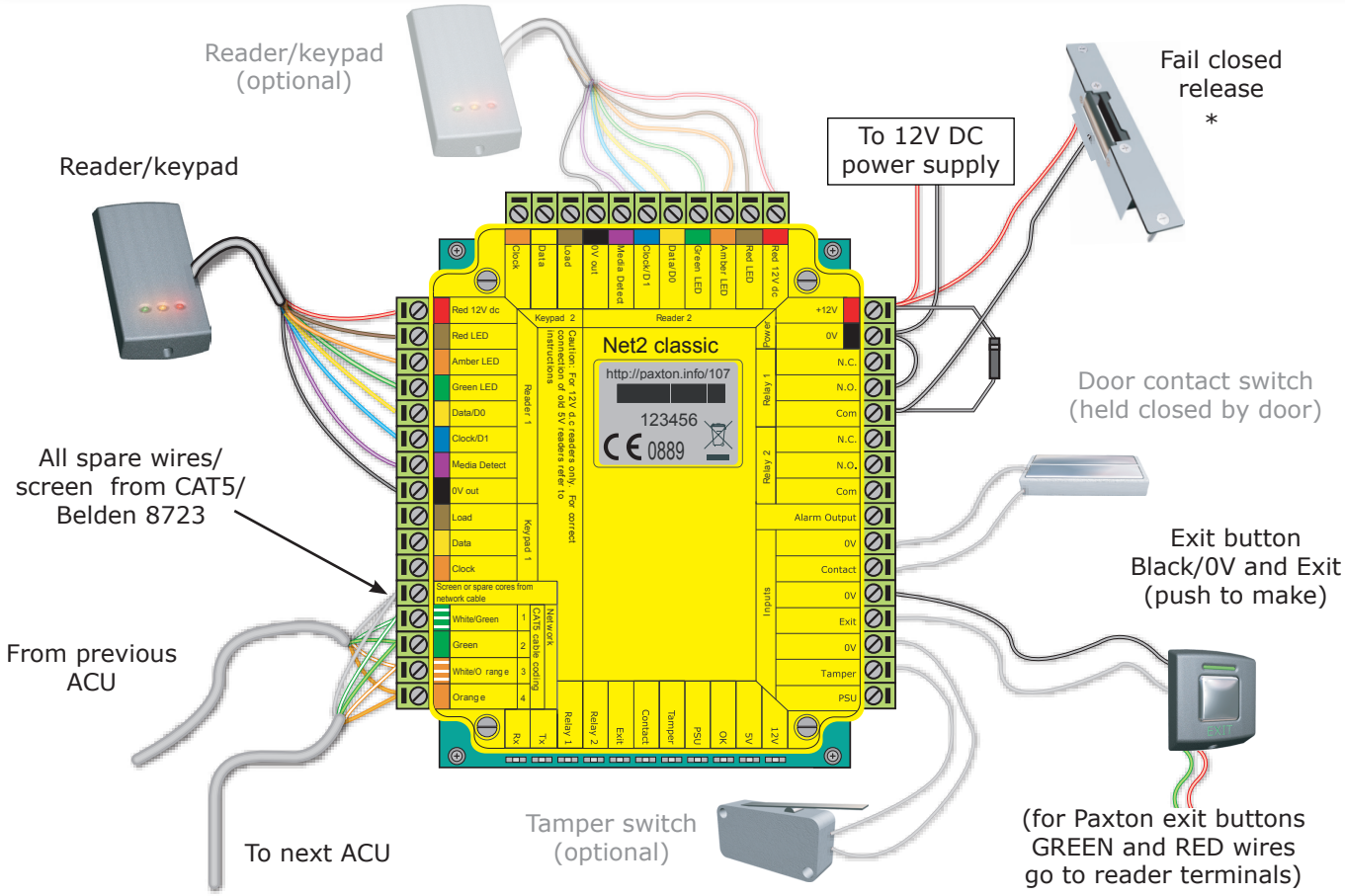
Technical help is available: Monday - Friday from 07:00 - 19:00 (GMT)
Saturday from 09:00 - 13:00 (GMT)

Documentation on all Paxton Access products can be found on our website - http://www.paxton.co.uk/



* For a fail open lock (Maglock), the 0V link wire must be connected to the "NC" terminal.

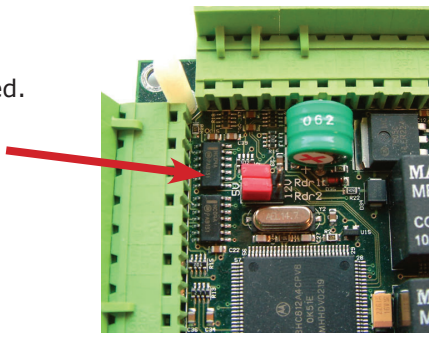
This ACU has 2 reader ports and 2 output relays, but can control just one door. The configuration of one control unit per door greatly simplifies installation and is ultimately highly cost effective

BEFORE CONNECTING THE READER.

The following readers are 5V units and the controller must be reconfigured. This is done via the RED jumper found under the yellow label.

Before 2005 - One Piece Units

600-628 TOUCHLOCK membrane keypad
485-374 TOUCHLOCK keypad stainless steel
409-711 CARDLOCK reader
266-898 CARDLOCK reader



A full Net2 installation manual is available at - http://paxton.info/49 or call the communications team on: **+44 (0)1273 811011.**

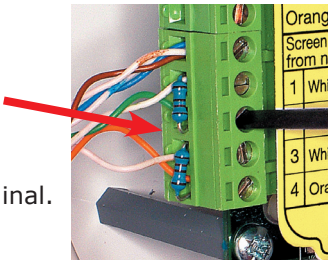
This product is not suitable for retail sale. All warranties are invalid if this product is not installed by a competent person.

RS485 data line

90% of installation faults are caused by wiring errors on the RS485 data line.
Special attention to getting this right first time saves a lot of time and effort.

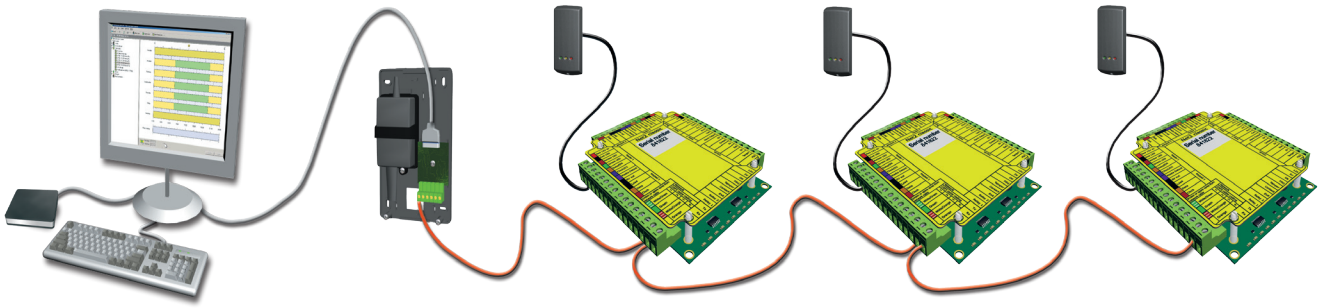
END OF LINE TERMINATION RESISTORS.
- These must be wired across each data pair at the beginning AND end of the data line. Resistor rating must be 120 ohm.

READER & DATA CABLE SCREENS.
- Data cable screens and spare cores MUST be connected throughout.
- Reader and keypad screens where provided, should be connected to the Black 0V terminal.



The data line must be wired in a single daisy chain. The data converter may be located at any position along the data line. The resistors will then be fitted in the two ACU's at each end of the line.

The example below requires two resistors to be fitted at the RS232 converter at the beginning of the line and also the 3rd ACU at the end.



RS485 data line checks

Power down all TCP/IP, USB and RS232 converters (individual and Net2 plus).

- ✓ Check the resistance across each data pair is 60-80 ohms.
- ✓ Check that there are no data line to screen shorts.
- ✓ Check the screen of the data cable is continuous - this provides the 0V DC system reference.

Control unit installation

Wire the components to the Access Control Unit (ACU) as shown on the first page. This will include:

- Reader/Keypad
- Electric Lock
- Power supply
- Any other optional components

Press the exit button or in the absence of an exit button, short the 0V and exit terminals together. Relay 1 LED will come on and the lock should release.

The reader's default indication has all the LED's on. Access granted is denoted with a single flashing Green LED, Access Denied is a single flashing Red LED.

PC Installation

The current specification for compatible PC hardware, network and operating systems is available on our website at the following link: http://paxton.info/720

Here is the list of topics about this product that receive the most technical support enquiries.
We list them here to help you speed up the installation and trouble shooting process.

1 - Net2 - Upgrading software.

Net2 software upgrades are available free of charge, either supplied on CD or from the Extranet. Net2 can be upgraded within the same revision or to the next full version (Note: It is not possible to upgrade directly from version v2 to v4 - you must first upgrade to v3.)
Upgrades can be run directly over the current installation; there is no need to uninstall the previous version. It is recommended that an end user advise their installer before carrying out an upgrade.
Ensure the PC specification meets any new requirements.

2 - Readers/keypads not working.

- Software settings - Confirm that the settings of the reader or keypad are correct.
- Connections - Check the wiring and integrity of the connectors. Where possible, test this reader on the other port.
- Cable - Belden 9540 should be used to extend the reader cable (100m maximum). Twisted pair alarm cable should not be used. To confirm that an extended reader cable is not at fault, wire the reader direct into the reader port.
- Supply voltage - Confirm that the voltage is within specification. (see table)
- User token - Confirm that the user token used for testing is OK by presenting it to a known working reader.
- Interference - Confirm whether the reader works when tested 'in hand' and not mounted on the wall. Ensure that readers are not mounted back to back or there is no interference from other local RF devices.

3 - Cannot detect ACU via TCP/IP.

1 - Ensure the TCP/IP interface has been detected in the Net2 Configuration Utility, and responds to a PING from the utility. A static IP address must be used for the interface.
2 - Restart the Net2 server.
3 - Make sure that the PC firewall allows the Net2 TCP/IP ports through. (See TCP/IP documentation)
4 - If the interface is responding, try a loopback test (See TCP/IP documentation)
5 - The Net2 data line should be checked for resistance readings, screen continuity, and screen shorts.

4 - Cannot detect ACU via a Serial Port comms converter.

1 - Confirm the comms converter is connected to the correct serial port and powered. A USB to Serial converter or PCMCIA card should not being used.
2 - Restart Net2 Server.
3 - Check the Net2 data line for resistance readings, screen continuity, and screen shorts.
4 - In the Configuration Utility, manually select the serial port and then restart the server.
5 - Test serial port.

5 - Net2 Workstations.

Net2 Workstation software allows more than one Net2 operator to connect into the same Net2 system at any one time. Connections can be established over most TCP/IP networks, including VPN through the Internet. Net2 Workstation software is included on the Net2 CD and is an option during installation. No addition license is required. Net2 Workstation software must be the same version as that running on the Net2 server.
Workstation software can also be installed on the server machine allowing it to view other Net2 servers on the network. Once Net2 software has been loaded, run the installation again choosing Workstation.
It is recommended that the number of concurrent connections be limited to five.

6 - Moving a V4 database to a new PC.

Ensure the new PC meets the minimum specification. All of the files containing the site-specific information in a Net2 system are stored in a single folder. The default location for this information is C:\Net2 Access Control.

- **On the old PC.** Using the Net Server Configuration Utility, go to the Database tab and click the Create Copy button. This creates a copy of this existing database into a Zip file.
- **On the new PC.** Load the Net2 software onto the new PC. Make sure the version is the same on both machines. Copy across the Net2Database.zip file into C:\Net2 Access Control. Using the Net Server Configuration Utility, go to the Database tab and click Import Copy, browse to the Net2Database.zip in the C:\Net2 Access Control folder and click OK. Once completed, run the Net2 application to confirm all details have been transferred correctly. Disconnect the Net2 dataline from the old PC and connect it to the new PC.
- **Custom Settings.** The settings held in the Configuration Utility are not transfered with the database. Details of any TCP/IP nodes, custom Wiegand configuration, etc. will need to be input manually on the new PC.

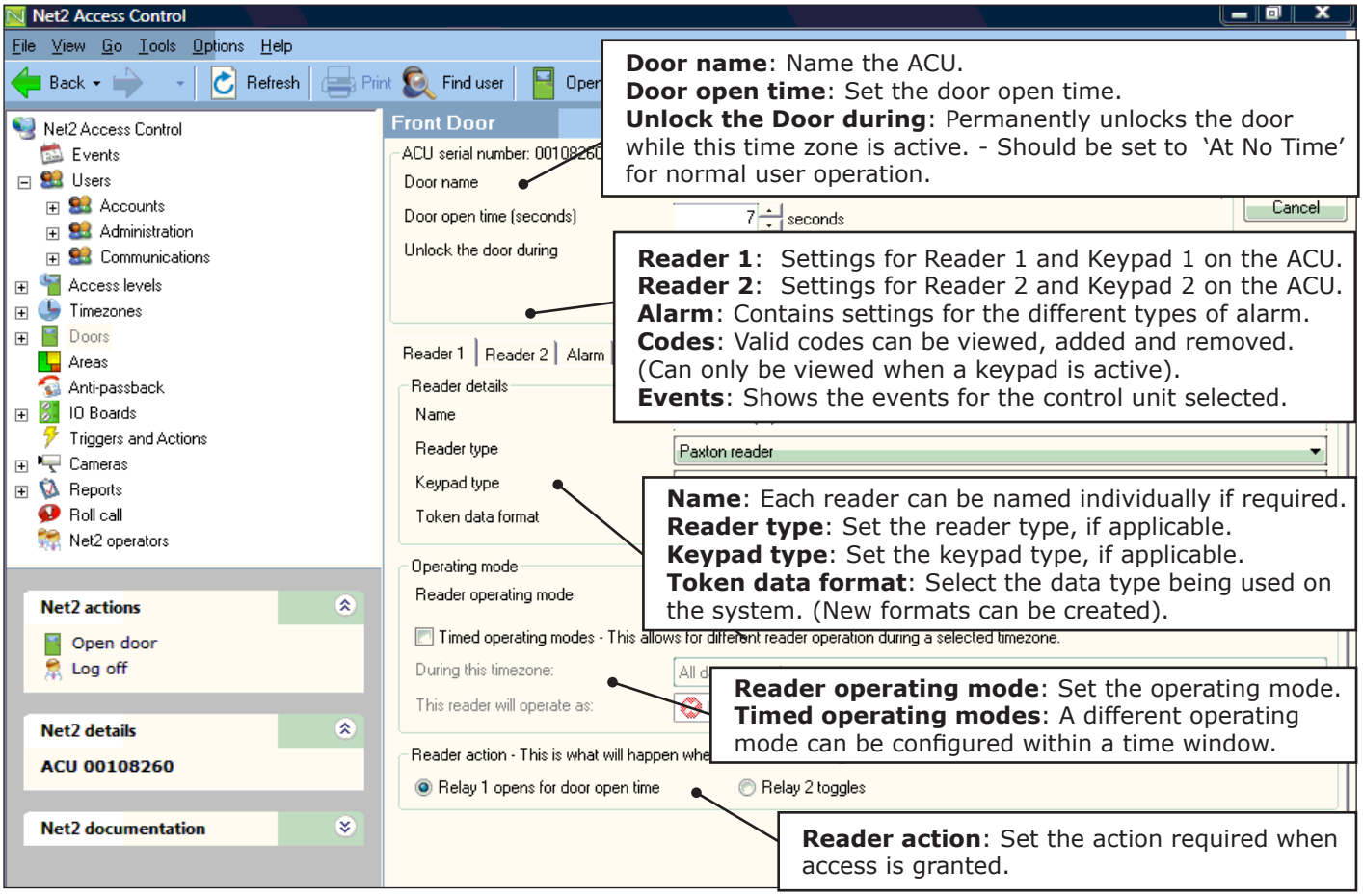
7 - ACU not responding or fails to be detected (Data line resistance check).

First power down the converter (RS232 or TCP/IP) and disconnect any ACU's that do not have a flashing OK LED. Using a Multimeter, measure the resistance across the White/Green and Green pair at one end of the network. A resistance of between 60 and 80 ohms is required. Repeat the test for the White/Orange and Orange pair. This is vital for a stable and trouble free installation.

8 - Fire alarm integration - Net2 Professional software must be used.

A volt free normally closed contact from the fire alarm system should be wired across an ACU input (Contact/PSU/Tamper/Exit). The software for that ACU is then configured via the Fire Alarm Tab in the doors screen to select all the doors that this trigger signal will open.
Fail open locks will be required on fire doors. Break glasses should be installed to drop power to the lock manually.

Software installation



Specifications			
Features		Min	Max
Number of Cards		1	10,000
Number of PINS		1	10,000
Access Levels		1	250
Time Zones		1	64
Maximum door open time		1 sec	99,999 sec
Number of Codes		1	50
Doors per ACU		1	1
Reader ports per ACU		1	2
Readers per port		1	2
Keypads per port		1	2
ACU per data line		1	200
Data lines per PC		1	50
Data retention after total power loss		9 hours	
Events stored in ACU with no server connection			2,454
Electrical		Min	Max
Voltage		11V DC	15V DC
PCB Current (depending on activity)		110 mA	350 mA
Relay switchable voltage			24V DC
Relay switchable current			4 A
Alarm output current			1 A
Combined reader port output current			500 mA
Environment		Min	Max
Operating temperature - Battery limits		0 °C	+ 55 °C
Waterproof			No
Dimensions	Width	Height	Depth
	102 mm	116 mm	30 mm

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