

DeltaQuest

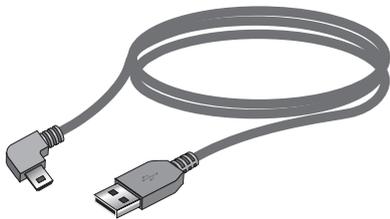
QUICK SETUP GUIDE



Getting Started

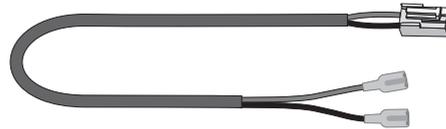
Before you start your DeltaQuest installation, you need to do the following:

- Ensure that you provide a mains spur outlet fitted with a 3A fuse for each DeltaQuest enclosure.
- Provide a suitable PC to host the Membership/Access Control software.
- To configure and test DeltaQuest, you will need to install the DeltaQuest Configuration and Diagnostic Software on the PC. You can download a copy from the Partner Portal on the nortechcontrol.com web site.
- Unpack and check the contents of the box. Each DeltaQuest enclosure is accompanied by the following items:



USB 2.0 A plug to Mini B plug lead

This can be used to connect a Master DeltaQuest to the host PC where USB is the chosen communication option.



Backup battery cable

If a backup battery is to be fitted, connect this cable to the connector on the fuse panel and follow instructions for fitting a battery.



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Installation

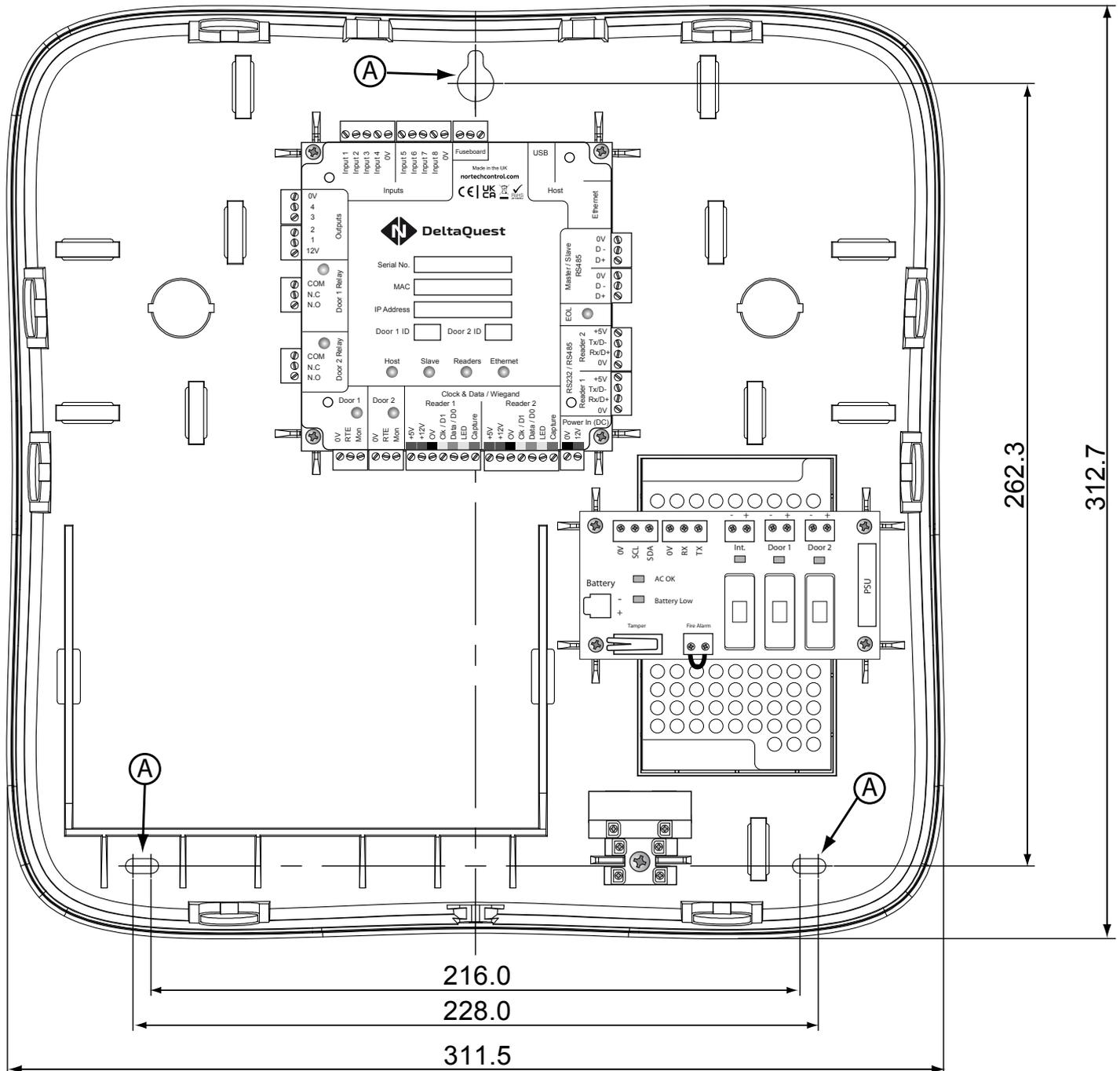
Safety Instructions

- The DeltaQuest controller should only be installed and serviced by qualified service personnel.
- Disconnect the power supply before touching any components within the enclosure. The power must be switched OFF when changing any connections within the enclosure.
- Only use cables that meet the recommended specifications for connection between controllers and for connecting readers to the controller.
- To maintain safety, do not modify or add anything to the DeltaQuest other than stated in this installation guide or advised by Nortech engineers.

Mounting

Choose a location where there is sufficient space to run cables into the cable apertures (knockouts provided in bottom for power supply cable, and top and both sides for other cables). There are also two knockouts for rear entry.

Loosen the cover retaining screw and lift off the front cover. Use appropriate screws and fixings through the 3 mounting holes (marked 'A') in the back panel of the enclosure (shown with dimensions below):



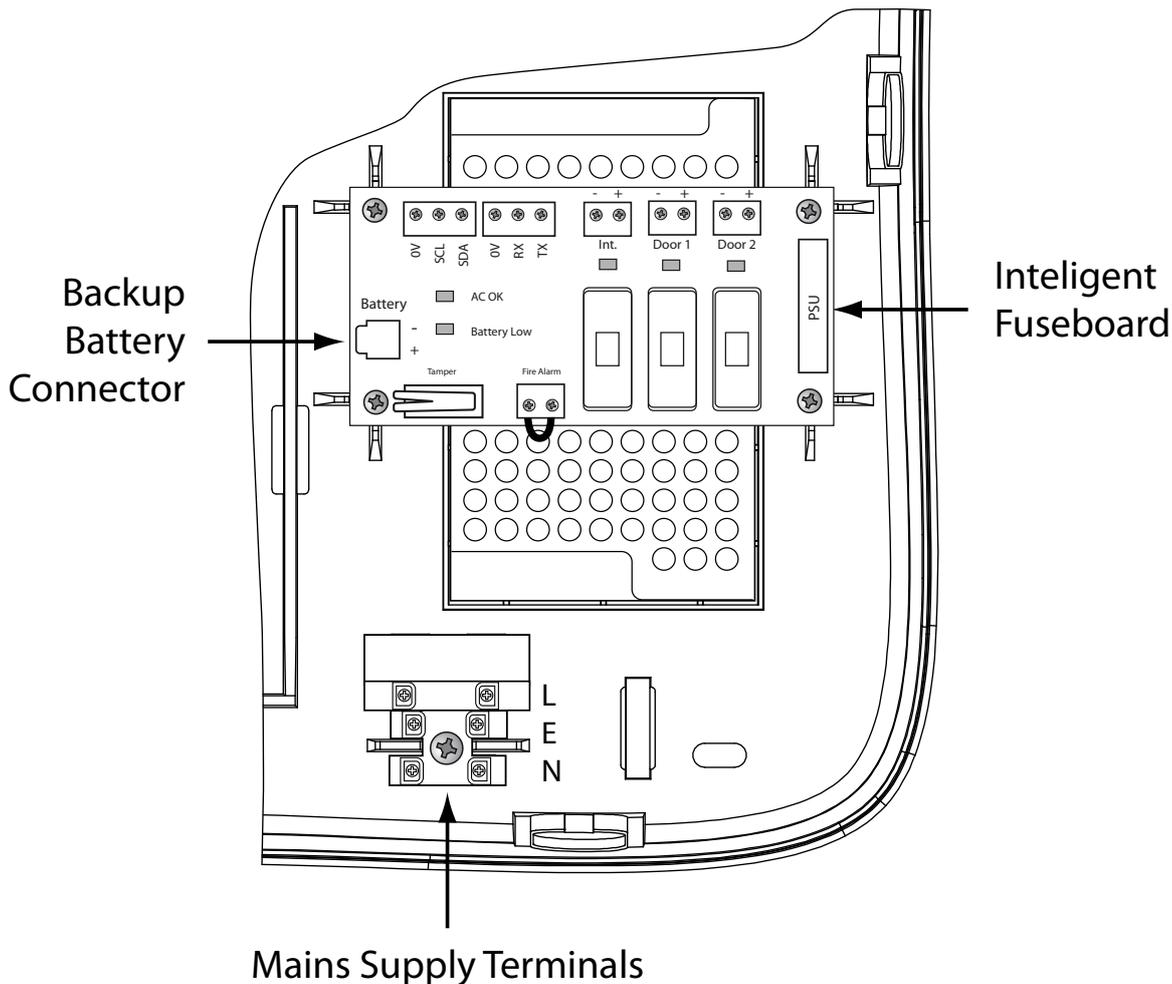
Connecting Power to the DeltaQuest Enclosure

The enclosure is fitted with an integral 12VDC, 3A power supply unit. Cable the fused mains terminals within the enclosure to a suitably fused 240VAC power supply using appropriate mains cabling.



Do not switch on the mains power before the unit is fully installed.

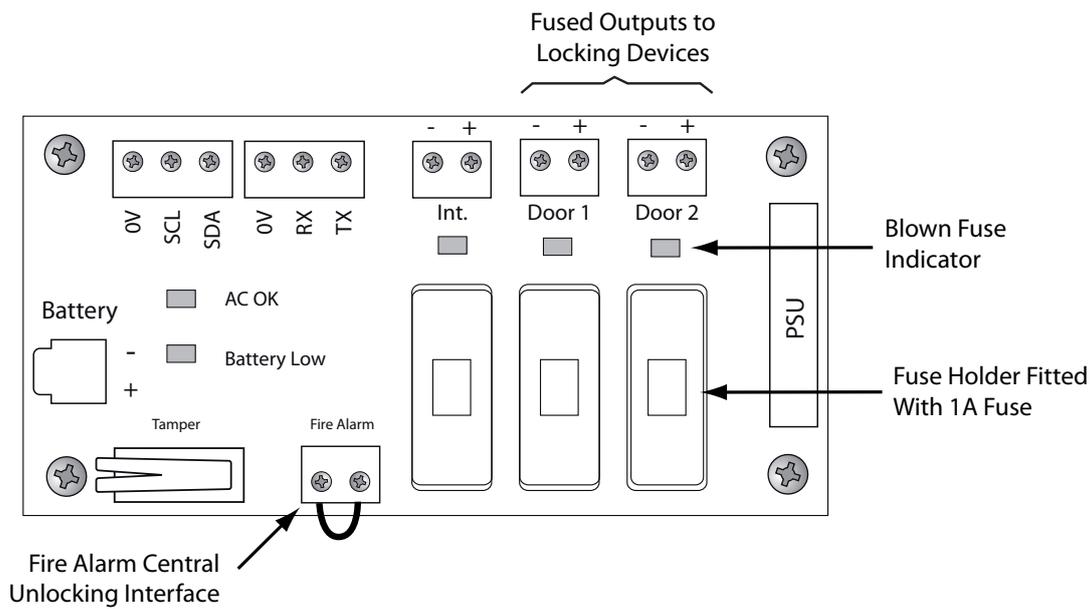
Always disconnect the mains supply before working on any part of the unit.



Connecting 12V DC Power to Locking Devices

The fuse panel has a fused supply to the control PCB plus two 12-volt DC outputs available for powering locking devices (detailed in the following illustration). Each output is protected by a 1A cartridge fuse (20mm glass bodied, quick-blow). Each fuse holder is accompanied by an LED to indicate if the fuse has blown or is missing when a load is connected to the output.

Where fail-safe locking devices are used (unlocked upon power failure), it is possible to enable a fire alarm panel to unlock all doors by disconnecting power from all locking devices in the event of a fire. The fire alarm panel needs to have a normally closed, voltage free relay contact that opens when the fire alarm is sounded. Remove the wire link from the fire alarm interface and connect the terminals to each side of the normally closed contacts using a suitable cable.



Backup Battery

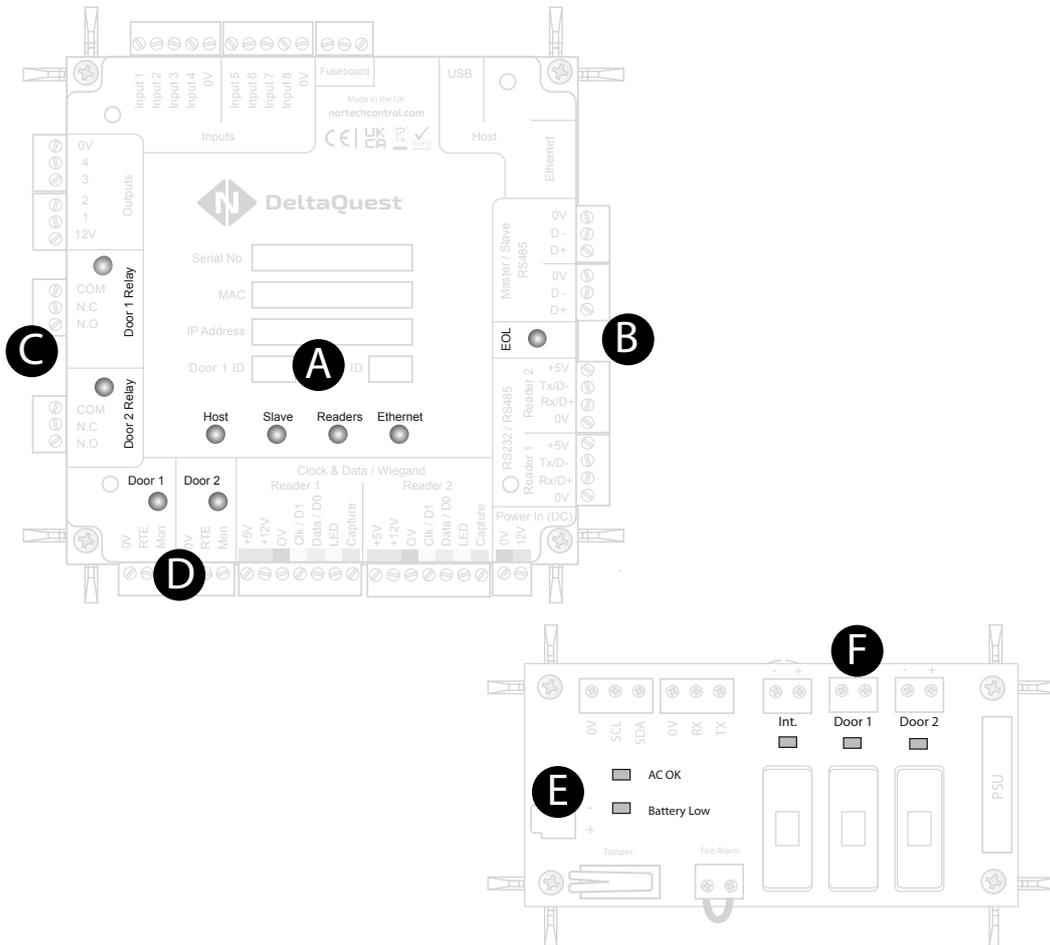
If a battery is to be fitted, it must be a sealed lead-acid rechargeable battery that can be mounted in the space to the left of the power supply unit. There is sufficient space to accommodate up to a 7 amp-hour battery (depending upon the model). Use the supplied cable to connect between the battery terminal connector on the left-hand side of the fuse board to the battery spade terminals.



To avoid the risk of injury when the front cover is removed, the battery must be held securely inside the enclosure. Ensure that you fit a retaining strap to the anchor points on either side of the battery compartment.

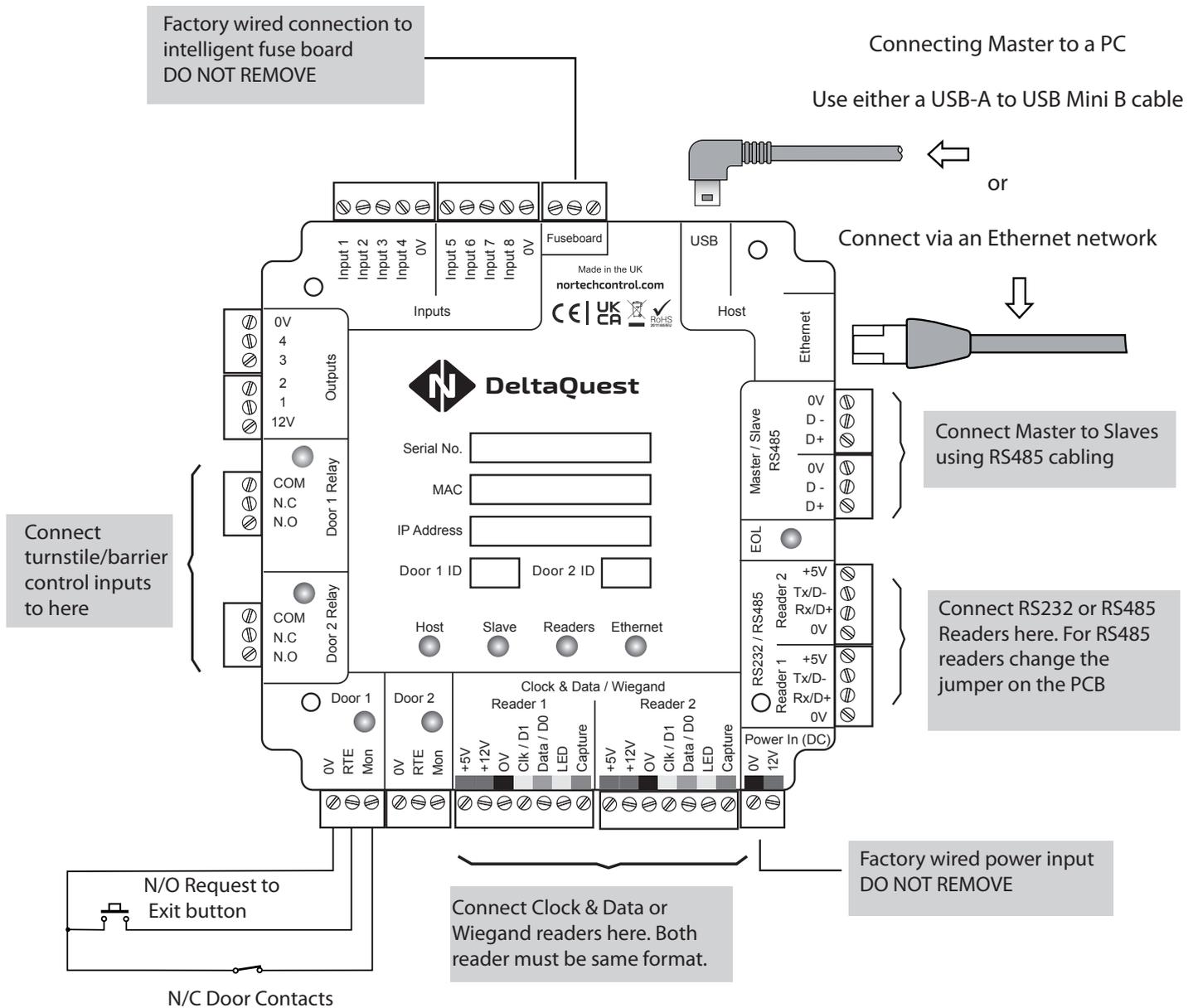
LED Indications and Connections

LED Indications



GROUP	LABEL	FUNCTION
A	Host	Flickering red indicates comms activity to host (Master only).
	Slave	Flickering red indicates comms activity between Master and Slaves.
	Readers	Flickering red indicates data reception from either of attached readers.
	Ethernet	Flickering red indicates activity at Ethernet port.
B	EOL	Glows red when RS485 end-of-line termination is active on the controller.
C	Door 1/2 Relay	Glows red when corresponding door relay is operated.
D	Door 1/2	Not currently used.
E	AC OK	Glows red when mains supply is present.
	Battery Low	Glows red when the connected battery voltage is dangerously low.
F	Door 1/2	Green indicates fuse for associated 12V door output is OK. Red when fuse blown.
	Int.	Green indicates the fuse for internal 12V feed is OK. Red when fuse blown.

Connections

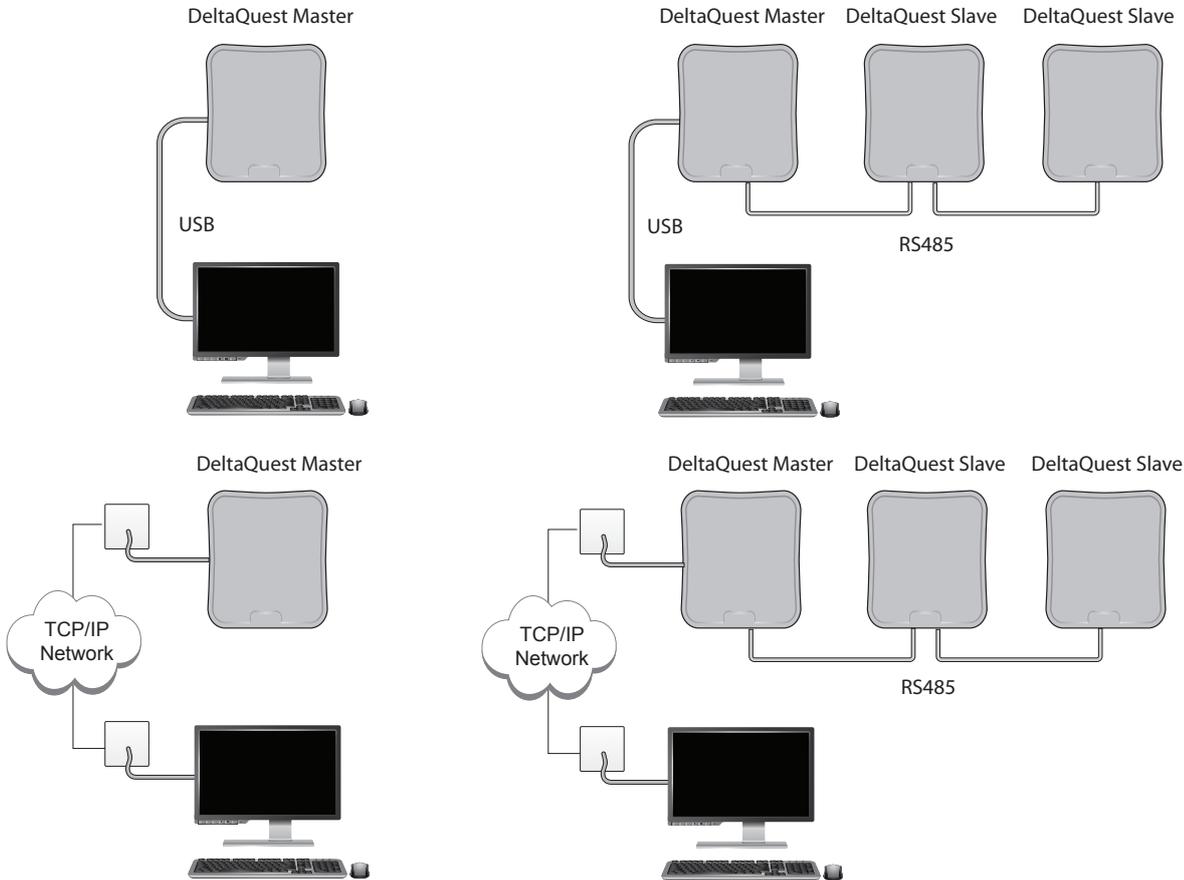


Connect each DeltaQuest controller according to its function. The main connections are:

- PC interface (Master only) - You can connect the controller to the host PC via an Ethernet network or directly using the supplied USB cable.
- RS485 master/slave network - Connect Slave controllers in an RS485 'daisy chain' network to the Master Controller.
- Readers - Connect readers and/or keypads to the appropriate connectors according to their interface type (Clock & Data, Wiegand, RS232 or RS485).
- Output Relays - Connect either NO or NC contacts to the turnstiles/barriers as required.

Configuration

Example Network Layouts



Configuration and Diagnostic Software

Once fully installed, the DeltaQuest controllers can be configured using the DeltaQuest Configuration and Diagnostic Software installed on the host PC.

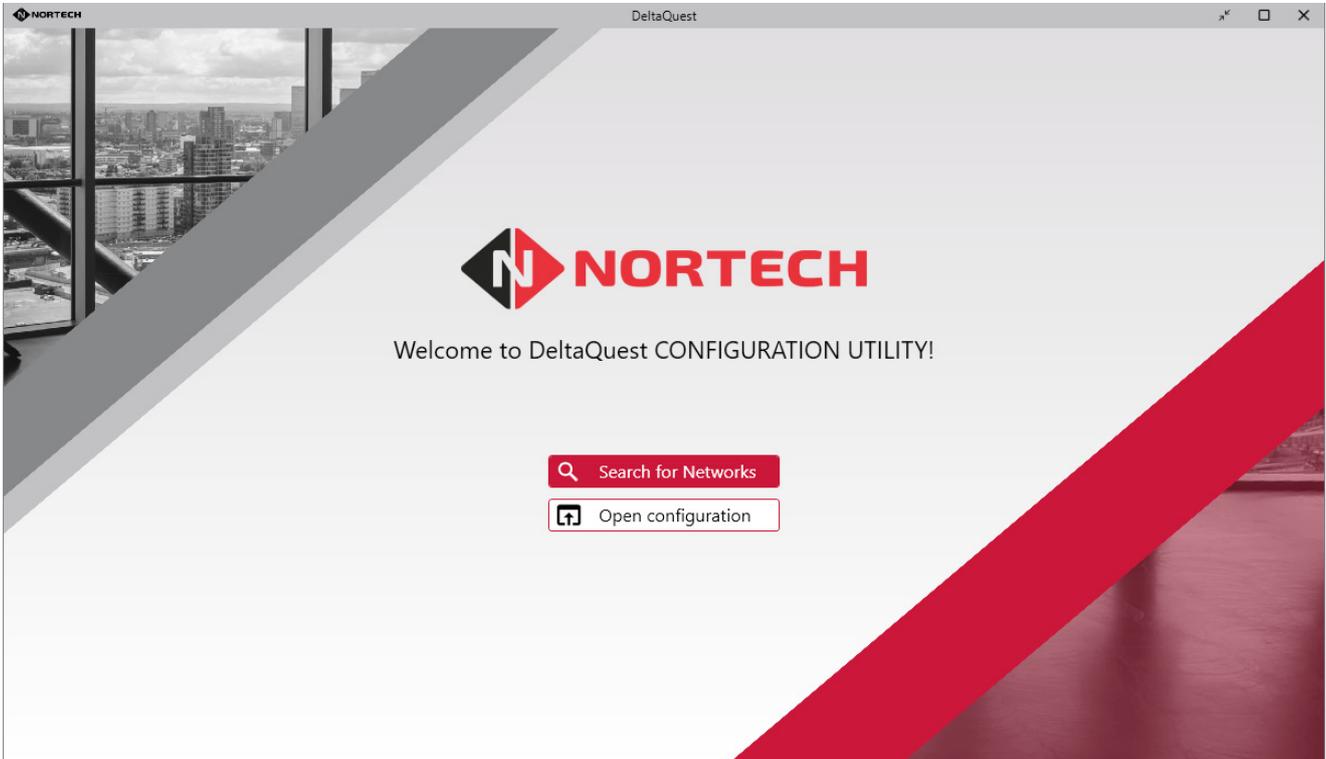
This explanation covers the initial configuration of a single DeltaQuest, or the Master DeltaQuest where a new network is being installed. For adding slaves to an existing DeltaQuest network, this procedure isn't necessary. Refer to the online help on how to add a new slave to an existing network.

Note: If you wish to add a DeltaQuest slave to an existing CRC400 network, it needs to be configured using the Configuration and Diagnostic Software by directly connecting it to the PC using the USB cable. The procedure for this is explained in an application note.

All new DeltaQuest units are, by default, set to Slaves (determined by their door assignments). To create a Master, you need to change its 'Door 1 ID' setting to '1'. Once this has been carried out, the network can be connected up and configured via the Master.

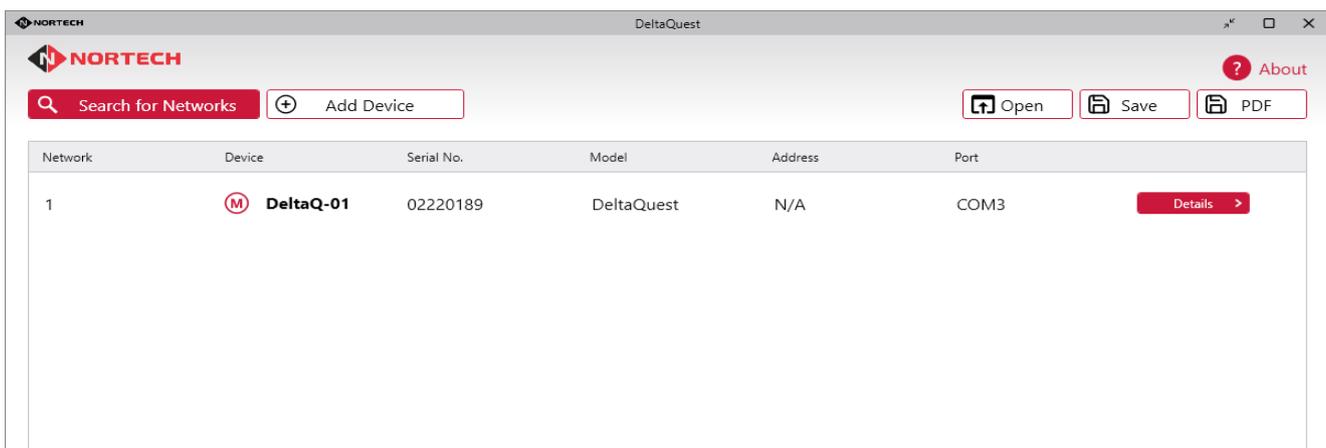
The following is a description of how to set a DeltaQuest unit to be a Master.

Once the Configuration and Diagnostic Software has been installed and the DeltaQuest unit is connected to the PC via the USB cable (with other controllers disconnected), run the program. It will display the welcome screen as follows:



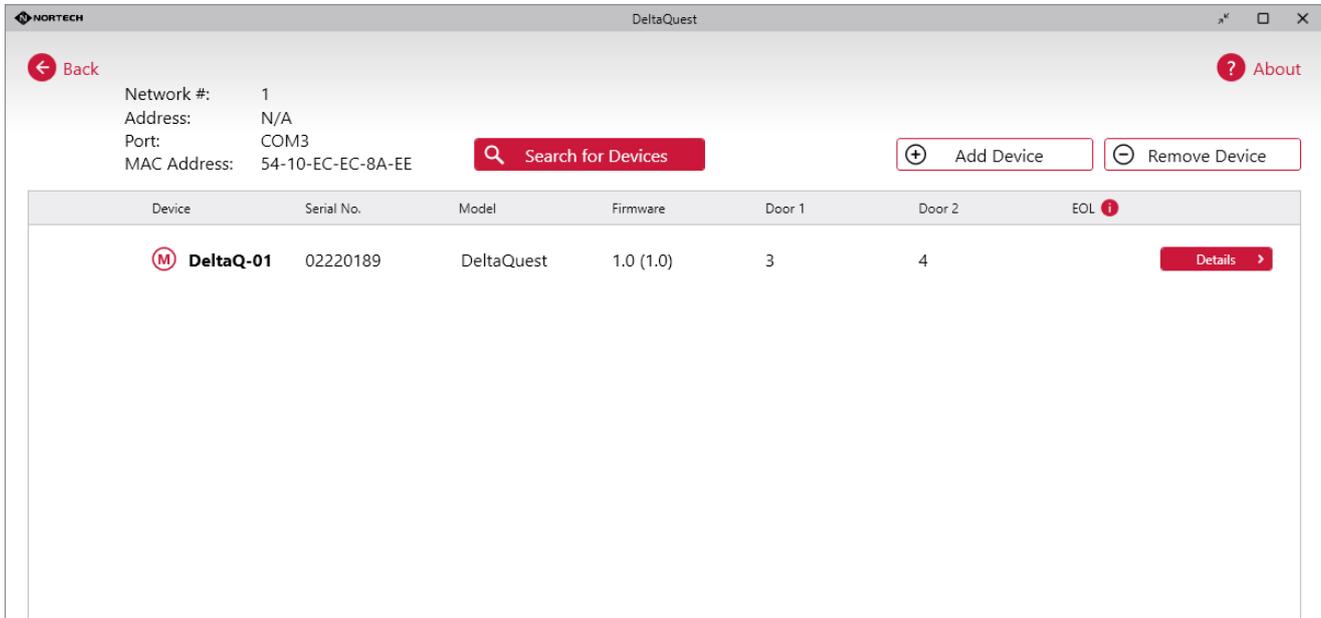
Click on 'Search for Networks'. The program will search for all Master controllers connected to the same TCP/IP network as the PC, or in this case, connected to USB ports (emulated COMM ports).

The screen will display the discovered network(s), which would appear something like the following image:

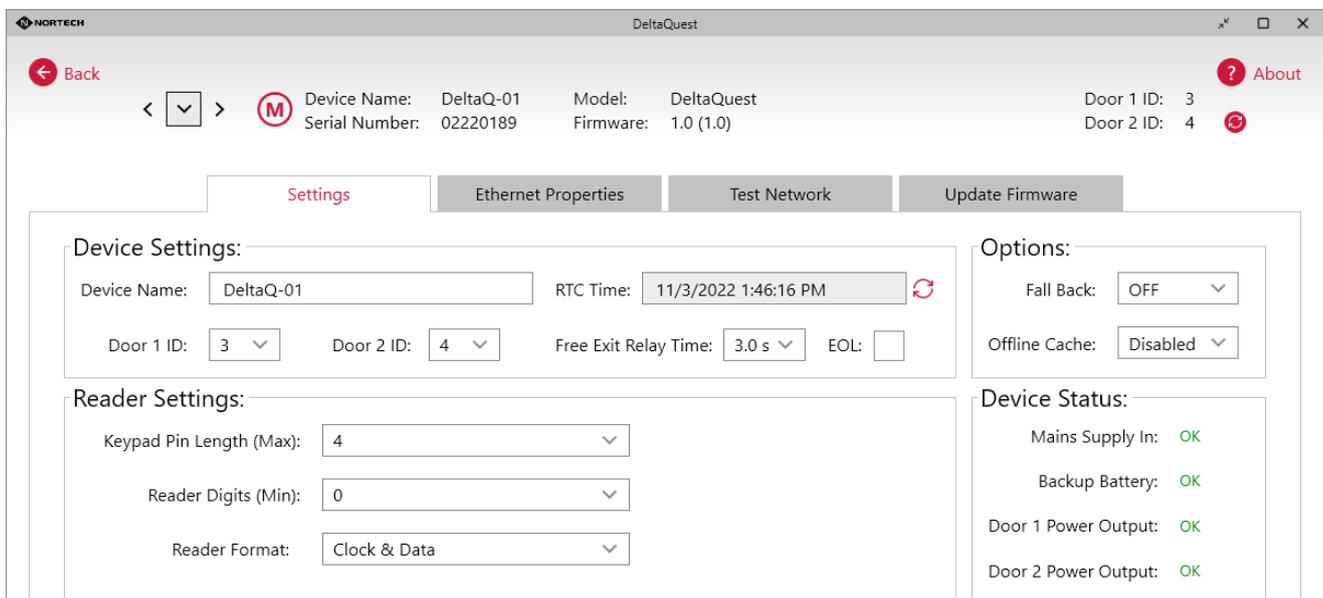


This shows the controller as 'Network 1' with its factory set name together with its serial number and model. In this case, the controller is connected via a USB connection that has been assigned port ID 'COM3'. If it had been connected over an Ethernet network then its IP address and port number would be displayed instead.

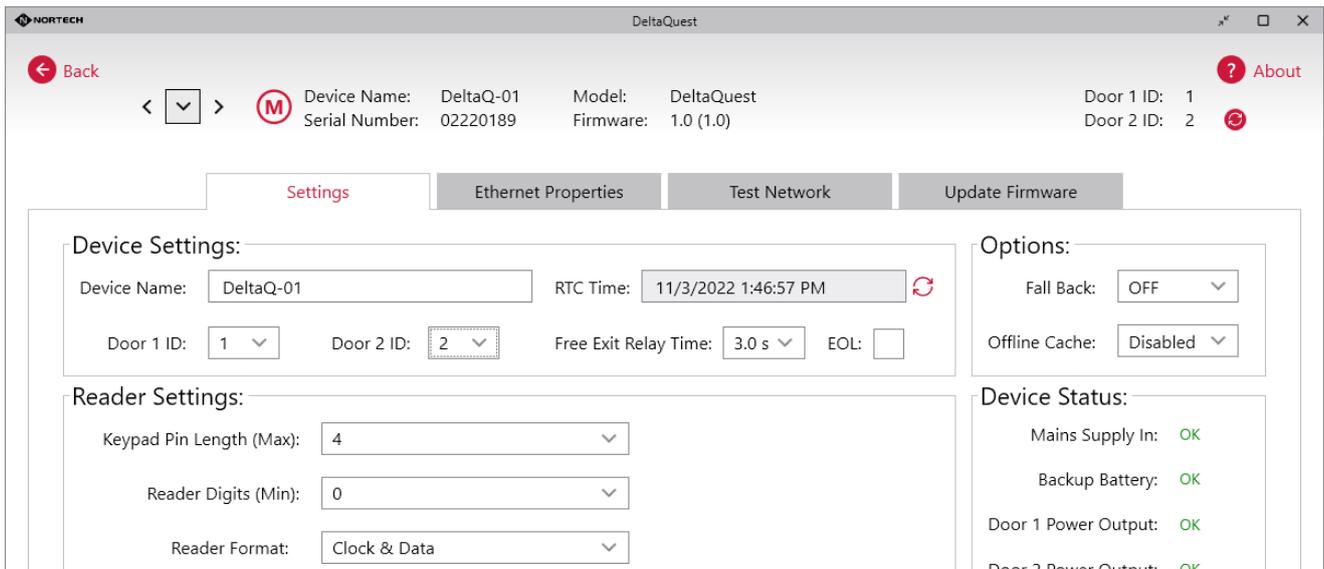
Click the 'Details' button to the right of the Master device to display its settings:



In this example, the controller 'DeltaQ-01' has 'Door 1' set to '3' and 'Door 2' set to '4'. This automatically makes it a Slave unit. 'Door 1' must be set to the value '1' to make it function as a Master unit. Click 'Details' to access the settings screen:



Now you can change the 'Door 1 ID' value to '1'. For convenience, you can set 'Door 2 ID' value to '2':



The screenshot shows the DeltaQuest configuration software interface. At the top, there is a navigation bar with a 'Back' button, a dropdown menu, and a status indicator 'M'. The main header displays device information: Device Name: DeltaQ-01, Model: DeltaQuest, Serial Number: 02220189, and Firmware: 1.0 (1.0). On the right, it shows Door 1 ID: 1 and Door 2 ID: 2. Below the header are four tabs: Settings (active), Ethernet Properties, Test Network, and Update Firmware. The Settings tab is divided into three sections: Device Settings, Reader Settings, and Options. Device Settings includes fields for Device Name (DeltaQ-01), RTC Time (11/3/2022 1:46:57 PM), Door 1 ID (1), Door 2 ID (2), Free Exit Relay Time (3.0 s), and EOL. Reader Settings includes Keypad Pin Length (Max) (4), Reader Digits (Min) (0), and Reader Format (Clock & Data). Options includes Fall Back (OFF) and Offline Cache (Disabled). On the right side, there is a Device Status section showing Mains Supply In: OK, Backup Battery: OK, Door 1 Power Output: OK, and Door 2 Power Output: OK.

Now that the unit is configured as a Master, the remaining units can be connected via an RS485 network and can then be discovered by the software. For further configuration details, including configuring the Master to be connected to the host PC via Ethernet, where required - refer to the online help of the DeltaQuest Configuration and Diagnostic Software, which can be accessed by pressing/clicking the F1 key.