MFLEX™ACCESS CONTROL

PC BASED DOOR ACCESS CONTROL

DESKTOP – WEB – MOBILE

The following manual details information relating to the planning and installation of the door access control system hardware only. They replicate and collate instructions that may also be provided with other electronic devices or sub-systems you have purchased. Details on how to configure and manage your installation are provided through help pages reachable from the Web Administration Console software directly.

Door Control Unit Installation

Best results will be achieved when following these instructions as they describe the planning and installation of a single Access Control Door or Entrance. A wiring diagram with notes is shown below, that states clearly all the common associated devices that <u>may</u> be required for each single door installation. The main circuit board can be removed during enclosure installation but must be stored and handled with care.

Planning

The DCU Single Door Control Unit is designed to be installed locally to the door or entrance it will serve in a dry internal location. This allows all cable connections to be short and efficiently run. All connections are made by removable side-entry polarised screw terminals designed for multi-stranded cable types. All cables entering the door control unit housing must not be coiled up inside but routed efficiently through the various edge and rear cable entry knock-outs and drill points of the enclosure. Cable tidy anchor points are provided with suitable cable ties provided. Please ensure that the rear enclosure mounting screws do not foul the PCB or terminals.

Power Supply

The DCU can be powered from a single low voltage DC regulated supply only. The voltage input range must be between 8-16 Volts DC; ratings outside of these may cause damage to the control unit and / or its associated devices. The DCU single door control unit has been designed for low power operation. Its quiescent current is only 80mAmp rising to 300mAmp with both proximity readers connected and the lock and alarm relays energised.

> Always use an individual power supply to power each door and its associated local components in isolation. Never share the power supply between adjacent door control unit as ground loops may be created that can cause communication bus faults over the RS485 interconnecting network. The current capacity of the PSU should be greater than the locking peak current consumption by at least 300mAmp (0.3A).

Cable & Wiring Choices

The correct choice of cable types will affect the overall performance and cost of the system installation so care and understanding of the types and when to use them is important.

> The use of CAT5/6 or similar cable is not recommended as its solid core construction breaks easily under mild mechanical stress and will make service & repair difficult.

The differing types of cable and when to use them are explained in the table below:

Application	Cable Type	Max Distance	Notes
Communication	BELDEN 8132 BELDEN 9842 6CORE SECURITY	1200 M 1200 M 50 M	Use Belden equivalents if required. Screen is connected to communications terminal G from Adapter to the door control unit
Readers	BELDEN 9535 6 CORE SECURITY	50 M 10 M	Connect the screen to OV reader input
Power & Lock	4-6 CORE SECURITY	50 M	Any suitable unscreened power hook up cable can be used with sufficient conductor area for the current drawn
Egress & Contact	4-6 CORE SECURITY	50M	Any suitable unscreened hook up cable can be used

The total networking communication length must not exceed 1.2KM (1200M) from a single USB-485 or LAN-IP-485 Adapter and must not contain any spurs or star points. You can connect up to 128 DCU Door Control Units on one continuous network cable installation from one USB-485 or across multiple LAN-IP-485 Adapters (segments).

End of Line Termination

In the last door control unit which is the one furthest away from the USB or LAN-IP interface connection you must employ end-of-line resistor termination. Connect the two 120-Ohm resistors provided with the USB-485 or LAN-IP-485 Adapters, one across the last door control unit terminals T+ & T- and the other across R+ & R-. To check that the termination is correct, disconnect the USB-485 or LAN-IP-485 interface from the computer or network switch and measure with a multi-meter set on the resistance range that you can read between 60 to 70 ohms across the T pair and again across the R pair. The exact readings will depend on the total networking cable length and its resistance.

Door Monitor Contact Input

The Door Monitor Contact input is used to monitor the physical state of the door in its frame or closed position. This is normally achieved with a standard intruder alarm magnetic contact set. The type required is single-pole normally closed when the door is closed. The Door Monitor Contact will only monitor the physical state of the door and not the locked or security status of the lock.   The Door Monitor Contact will activate the Alarm Relay Output (Relay 2) when one of the following two conditions are met. If the doors lock mechanism is defeated and the door is opened by force or if the door is opened through a valid access, but then not closed correctly afterwards. The timing or delay of these events is programmable through the Web Administration Console software.

Alarm Relay Output

The Alarm Relay Output (Relay 2) can be used locally to the door or entrance to indicate if the door or entrance is in the alarm state. An alarm state condition is generated when the door monitor contact is fitted and the door is

forced open or left open too long.   Any general purpose sounder or other device may be switched with a rating not greater that 24VDC at 2A. The relay has normally open and closed volt free contact set (Form C). If the magnetic door contact is not fitted to any door control unit then this condition is automatically detected and disabled (no need to link out).

Exit Request Input

The Exit Request Input is normally used if an button is required to exit through the controlled door or entrance. It can be reassigned on the software to be used as a general purpose input for other purposes if required. Configurable options available are, intruder alarm set detect, power supply fault detect, general tamper input detect and release (free access) all system doors on a single closing contact. By default (factory) the operation is as an Exit Request Button utilised with a push-to-make momentary switch. If the exit button function input is later reassigned by the software application all functions are normally open with a closing circuit for an active state. If the release (free access) all system doors function is required only a single connection at one door control unit is required as the Host Computer running the software, will manage the command for the rest of the system. Never apply a voltage of any kind to this input as damage to the control electronics will occur.

Door Reader Connections

Reader connections are generally of a short distance and so you may use standard intruder alarm connection cable. Please observe the above cable choices table for exact types depending on distance to the appropriate reader input on the door control unit. Below are the wiring colours for the standard reader types you may encounter:

Reader Model	Type	Connections	Notes
MPROX / MPROX-ECO	125KHZ ASK 26 Bit Wiegand	RED = 12V BLACK = 0V GREEN = D0 WHITE = D1 BLUE = GLED *	Use screened Belden 9535 over 10M * Blue wire not present / required with MPROX-ECO variant
MPROX + PIN (METLOCK)	125KHZ ASK 26 Bit Wiegand with 4 Bit PIN Function	RED = 12V BLACK = 0V GREEN = D0 WHITE = D1	Use screened Belden 9535 over 10M. Set door control unit reader type to MPROX+PIN at the softwareu
MPROX - MF	13.56MHZ Smart Card Reader (CSN)	RED = 12V BLACK = 0V GREEN = D0 WHITE = D1 YELLOW = GLED	Use screened Belden 9535 over 10M
MPROX – MF - KP	13.56MHZ Smart Card Reader (CSN) c/w PIN Keypad	RED = 12V BLACK = 0V GREEN = D0 WHITE = D1 YELLOW = GLED	Use screened Belden 9535 over 10M
UPR	125KHZ Universal Proximity Reader	RED = 12V BLACK = 0V GREEN = D0 WHITE = D1 BLUE = GLED	Use screened Belden 9535 over 10M
HID PROXIMITY READERS	125KHZ WIEGAND FAMILY	RED = 12V BLACK = 0V GREEN = D0 WHITE = D1 ORANGE = GLED	Use screened Belden 9535 over 10M

Testing a DCU Door Control Unit Installation Locally

The majority of each individual door control unit installation can be tested in isolation to confirm correct installation before connecting to a network of doors and the control computer. This is recommended as it will ensure a smooth flow to the next stage of networking the doors and connecting to the control computer.

The Lock, Exit Button, Magnetic Door Contact, Relay 1, Relay 2 and both Proximity Door Readers if fitted, can be simply checked for correct operation.

1) To test that the Door Lock (Relay 1) is operating correctly briefly press the Request to Exit Button. The Door Lock should unlock for approximately 5 seconds and then relock.

2) To test the Door Lock (Relay 1) and the Alarm Output (Relay 2) briefly press the Request to Exit Button and then open the door thus opening the Magnetic Door Contact. The Door Lock should relock within about 5 seconds. After 20 seconds, if the door is still open (ajar) then the Alarm Output Relay 2 will operate until the door is closed and secure.

3) To test for Door Forced Open you will need to disable the door locking mechanism and without pressing the Request to Exit Button open the door which in turn opens the Magnetic Door Contact. The Alarm Output Relay 2 will operate until the door is closed and secure once again.

> Other readers are available but their feedback signals may differ. The DCU control unit is fitted with two industry standard 26 Bit Wiegand interfaces so many readers of all types including bio-metrics may be used.
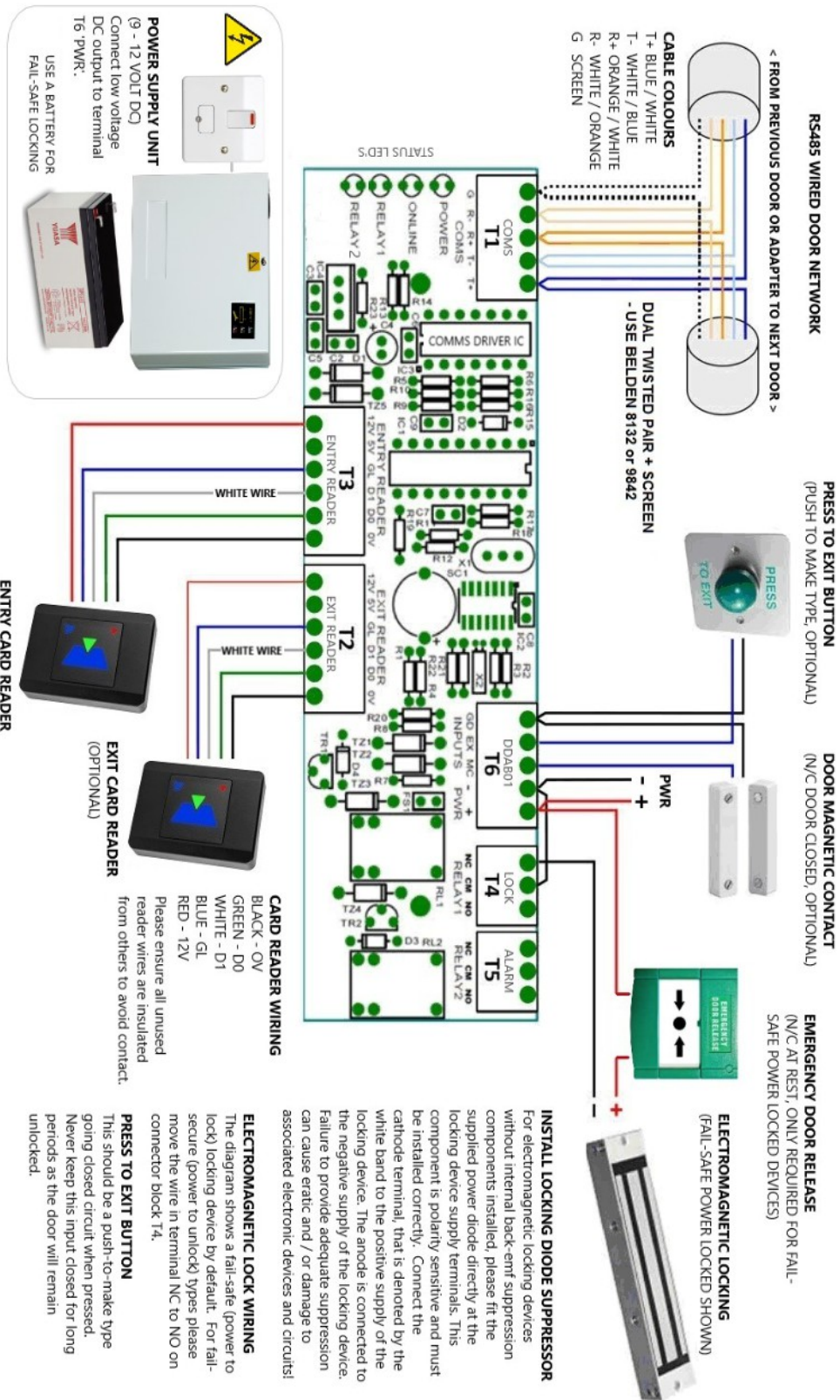
4) To test each Proximity Reader present a card or tag at each unit installed. The reader should beep and flash green briefly to indicate the reader has read the presented compatible token. After about 2 seconds the door control unit will flash the red light to green 6 times to indicate that this token has been read and processed but is unknown to the Door Control Unit (access denied).

> It is not possible to test the correct operation of the RS485 network at this stage.

Door Control Unit Serial Address

It is recommended at this stage that the unique serial number located on white label is recorded along with a descriptive name for the door location. The serial number provides the unique address required to find it on the multi-drop RS485 network or network segments. This information will be required when the software is installed on the control computer and door records are to be defined, addressed and commissioned.

Door Control Unit Wiring Diagram

POWER SUPPLY UNIT
(9 - 12 VOLT DC)
Connect low voltage DC output to terminal T6 'PWR'.

USE A BATTERY FOR FAIL-SAFE LOCKING

CABLE COLOURS
T+ BLUE / WHITE
T- WHITE / BLUE
R+ ORANGE / WHITE
R- WHITE / ORANGE
G SCREEN

RS485 WIRED DOOR NETWORK

< FROM PREVIOUS DOOR OR ADAPTER TO NEXT DOOR >

DUAL TWISTED PAIR + SCREEN
- USE BELDEN 8132 or 9842

STATUS LED'S

G R- R+ T- T+
COMS
T1
COMS

RELAY 2
RELAY 1
ONLINE
POWER

COMMS DRIVER IC

T3
ENTRY READER
ENTRY READER
12V 5V GL D1 D0 0V

WHITE WIRE

ENTRY CARD READER

T2
EXIT READER
EXIT READER
12V 5V GL D1 D0 0V

WHITE WIRE

EXIT CARD READER
(OPTIONAL)

PRESS TO EXIT BUTTON
(PUSH TO MAKE TYPE, OPTIONAL)

PRESS
TO EXIT

DOOR MAGNETIC CONTACT
(N/C DOOR CLOSED, OPTIONAL)

GO EX MC -
INPUTS PWR
DDAB01
T6

PWR
- +

LOCK
NC CM NO
T4
RELAY 1

ALARM
NC CM NO
T5
RELAY 2

EMERGENCY DOOR RELEASE
(N/C AT REST, ONLY REQUIRED FOR FAIL-SAFE POWER LOCKED DEVICES)

EMERGENCY DOOR RELEASE

ELECTROMAGNETIC LOCKING
(FAIL-SAFE POWER LOCKED SHOWN)

CARD READER WIRING
BLACK - 0V
GREEN - D0
WHITE - D1
BLUE - GL
RED - 12V

Please ensure all unused reader wires are insulated from others to avoid contact.

PRESS TO EXIT BUTTON
This should be a push-to-make type going closed circuit when pressed. Never keep this input closed for long periods as the door will remain unlocked.

ELECTROMAGNETIC LOCK WIRING
The diagram shows a fail-safe (power to lock) locking device by default. For fail-secure (power to unlock) types please move the wire in terminal NC to NO on connector block T4.

INSTALL LOCKING DIODE SUPPRESSOR
For electromagnetic locking devices without internal back-emf suppression components installed, please fit the supplied power diode directly at the locking device supply terminals. This component is polarity sensitive and must be installed correctly. Connect the cathode terminal, that is denoted by the white band to the positive supply of the locking device. The anode is connected to the negative supply of the locking device. Failure to provide adequate suppression can cause erratic and / or damage to associated electronic devices and circuits!

USB-485-ISO-TB Boxed Isolated Network Adapter Interface

Best results will be achieved when following these instructions as they describe the installation and best practice for this adapter product. The USB-485-ISO-TB Adapter has been designed to simplify the connection of a multi-drop network of DCU Door Control Units. You can use this product to connect the control computer to up-to 128 Door Control Units from a single USB connection. This adapter variant has been improved to achieve galvanic isolation between the control computer and the access control network. This promotes improved multi-drop RS485 networking performance and the reduction in possible ground loop communication errors.

Power Source

The USB-485-ISO-TB Adapter derives its power source from the standard USB port it is connected to. It does not require any additional power sources. This interface consists of two parts, the USB Connector Cable with 6 coloured terminations and the Interface Circuit Board. You will need to first terminate the USB Connector Cable ends to the Interface Circuit Board at the fixed miniature 6-way USB Lead terminal connections. The main access control network is connected at the Door Network removable 5-way connector. A small housing is provided with cable strain reliefs to enclose the terminations.

Connections

The access control network connection will allow the network connection of up to 128 Door Control Units with single continuous multi-drop door network installation. The connections from the Door Network output to the first control unit and on to the next are shown below:

Network Adapter	First Control Unit	Next Control Unit...
T+	T+	T+
T-	T-	T-
R+	R+	R+
R-	R-	R-
G (Screen)	G (Screen)	G (Screen)

Two LED's are embedded in the USB connector body. When at least one door is defined and the system software is actively communication with the door(s) then the Red LED indicates a transmission to the door network and the Green LED a reply. With these LED's and the 'Online LED' in each Door Control Unit any network cabling errors can be easily diagnosed and remedied. Additionally, there are two jumper links (LK1 & LK2) on the Interface Circuit Board which provide receive channel input bias. These should always be connected as supplied.

Interface Commissioning

The adapter software driver must be installed prior to the connection of the device to your PC. The application driver software is installed automatically when you fully install the software application which is available to download from our website (see later section topic). Once all the network

connections have been terminated and the software or device driver has been installed you are ready to plug in the adapter to a spare USB port on your PC. Once the device is recognised messages on your screen will prompt you on the progress of the automatic configuration of this adapter. If the software or driver has been installed correctly prior to the physical connection then this will result in your PC informing you that "The device has been installed correctly" or similar. If you have fully installed the software application, the adapter should be detected automatically and no further configuration is needed.

USB-485-RPI-TB Boxed Network Adapter Interface

Best results will be achieved when following these instructions as they describe the installation and best practice for this adapter product. The USB-485-RPI-TB Adapter has been designed to simplify the connection of a single, multi-drop cluster or complete network of Door Control Units. You can use this product to connect the control computer to up-to 128 Door Control Units by deploying one adapter. This device is supplied with an internal composite housing complete with cable entry ports.

Power Source

The USB-485-RPI-TB Adapter requires a 12VDC power source usually derived from the first Door Control Unit (back-powered) it is connected too. It does not normally require any other external power sources and the device is reverse polarity protected but correct polarisation is required for operation.

Connections

You can only connect a single segment of Door Control Units to one USB-485-RPI-TB Adapter. The connections for the adapter to the first control unit and on to the next are shown below:

Network Adapter	First Control Unit	Next Control Unit…..
12	+	*no connection*
T+	T+	T+
T-	T-	T-
R+	R+	R+
R-	R-	R-
G	G (Screen)	G (Screen)

Interface Commissioning

 The adapter software driver must be installed prior to the connection of the device to your PC. The application driver software is installed automatically when you fully install the software application which is available to download from our website (see later section topic). Once all the network connections have been terminated and the software or device driver has been installed you are ready to plug in the adapter to a spare USB port on your PC. Once the device is recognised messages on your screen will prompt you on the progress of the automatic configuration of this adapter. If the

software or driver has been installed correctly prior to the physical connection then this will result in your PC informing you that "The device has been installed correctly" or similar. If you have fully installed the software application, the adapter should be detected automatically and no further configuration is needed.

LAN-IP-485-TB Boxed Isolated Network Adapter Interface

Best results will be achieved when following these instructions as they describe the installation and best practice for this adapter product. The LAN-IP-485-TB Adapter has been designed to simplify the connection of a single, multi-drop cluster or complete network of Door Control Units. You can use this product to connect the control computer to up-to 128 Door Control Units by deploying one or multiple adapters across a local area network (LAN) or wider area network (WAN). This device is supplied with an internal composite housing complete with cable entry ports.

Power Source

The LAN-IP-485-TB Adapter requires a 12VDC power source usually derived from the first Door Control Unit (back-powered) it is connected too. It does not normally require any other external power sources and the device is reverse polarity protected but correct polarisation is required for operation.

Connections

You can connect a single or segment of Door Control Units to one LAN-IP-485-TB Adapter and you may also have multiple adapters on one system located in the same or other geographical locations. The connections for the adapter to the first control unit and on to the next are shown below:

Network Adapter	First Control Unit	Next Control Unit…..
12	+	*no connection*
T+	T+	T+
T-	T-	T-
R+	R+	R+
R-	R-	R-
G	G (Screen)	G (Screen)

Status LED's

The LAN-IP Adapter RJ45 connector has two embedded LED indicators for displaying the current status and activity of the adapter.

LEFT LED	LINK STATUS	RIGHT LED	ACTIVITY	NOTE
OFF	No Link	OFF	No Activity	Check Power + (12V)

| AMBER | 10Mbps | AMBER | Half Duplex |
| GREEN | 100Mbs | GREEN | Full Duplex |

Removable PCB Links

The LAN-IP-485-TB Adapter has three removable links on the PCB that are supplied connected. These are not normally required to be removed under normal circumstances and should be left connected. The operations of the three links are as below:

Link	Operation	Notes
LK1	RX- PULL UP	Normally Connected
LK2	RX+ PULL DOWN	Normally Connected
LK3	LAN-IP ENABLE	Normally Connected

Adapter IP Addressing

Each LAN-IP-485-TB Adapter installed on your system requires a unique IP address compatible with the Local Area Network (LAN) it is operating over. In order to configure this information you must connect each device to an Ethernet interface port of an IP switch or by way of a crossover IP cable to a local PC. Once the connection is made you can install and load the LAN Device Installer utility from the desktop shortcut after software installation (see later section topic). This utility will allow you to find and address correctly each LAN-IP-485-TB Adapter you have. You will need to configure the following three parameters:

> Fixed IP Address: e.g. 192.168.1.8
>
> Subnet Mask: e.g. 255.255.0.0
>
> Gateway: e.g. 0.0.0.0

When you first take delivery of one or more LAN-IP-485-TB Adapters they are configured with a fixed IP address (as above) so they can be discovered by the LAN Device Installer utility on the target LAN. In reality this must be changed to a unique fixed IP address compatible with the LAN and Subnet Mask Settings. There are many other settings available, but under normal conditions are supplied factory set correctly and do not require any further modification.

Firewall Considerations

For secure LAN and WAN infrastructures it may be necessary to open up Firewall Ports to be able to discover, address and communicate to the LAN-IP-485-TB Adapters. Standard port numbers that may need to be opened are 10001 for standard communication with the adapter from the access control software, 9999 for optional TELNET configuration and standard 80 for device installation, discovery and addressing.

LAN-IP Device Installer Utility

You can launch the LAN Device Installer utility from the desktop (see software installation topic later). It is recommended that you connect, discover and configure each device one at a time to avoid confusion as to which you are currently addressing. Once you have provided the correct static IP address, Subnet Mask and Gateway you can move on and configure another.
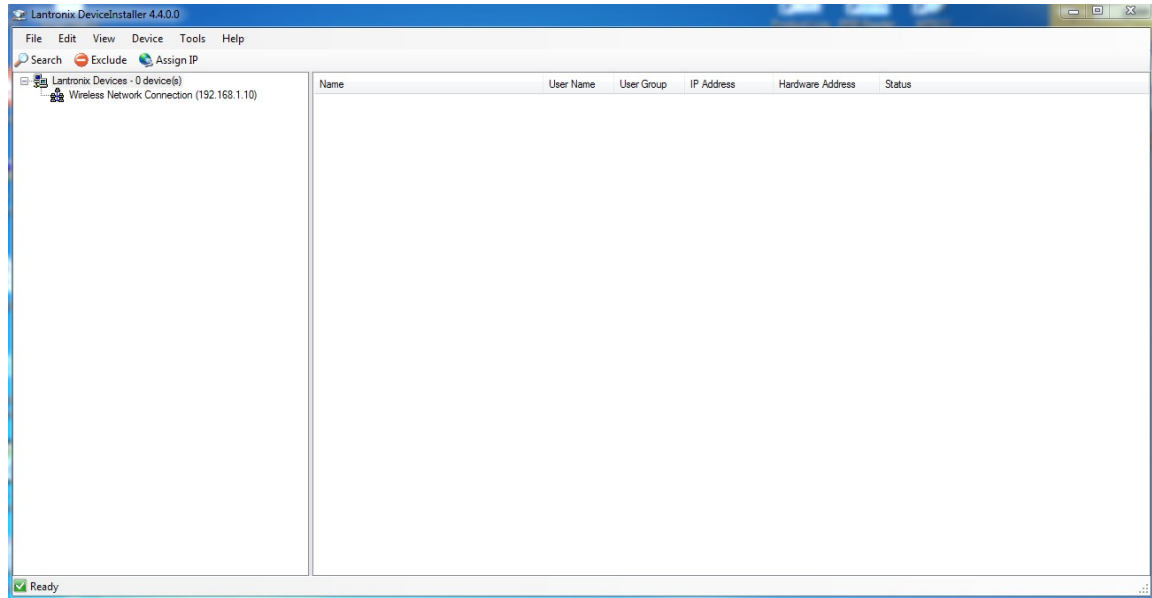
Once you launch the LAN Device Installer utility the search (discovery) for LAN-IP-485-TB Adapters will start automatically. If you change, connect or disconnect any adapters then you can click the SEARCH button again at anytime to update the list of adapters. In the right-hand list you should see your discovered LAN-IP-485-TB Adapters with an automatically assigned IP address compatible with your current LAN / DHCP connection.

From the right-hand list of discovered adapters select the one you need to configure. Select the ASSIGN IP button. Choose the option to assign a specific IP address and select NEXT. Complete the three boxes IP Address, Subnet Mask and Default Gateway. The latter is usually set at 0.0.0.0 as in itself an adapter is not required to find an internet connection. Knowledge of IP addressing and subnet mask use is assumed, but you may need to consult the owner of the network for more information on allowable static addresses and correct subnet mask usage. Finally select the NEXT and the ASSIGN buttons. The LAN Device Installer utility will update you on the progress of the configuration and prompt you to select FINISH when complete. The list of discovered adapters will automatically update on completion. Continue to connect, discover and configure any further LAN-IP-485-TB Adapters you have.

> Remember, you will need to reference the new static IP address of the newly configured adapter to the door or doors connected to it. Please see the Doors menu help topic on the Web Administration Console for more help and information on this and other door commissioning tips.

Advanced LAN Setup

You should not normally need to configure any more information than detailed in the previous section. If you feel however, that you need to check all advance settings then you can enter the Web Configuration of any individual LAN Adapter then you can double click on the entry in the right-hand list and select the Web Configuration tab. Then select the green GO arrow button. On doing this a Windows Security dialogue box will appear prompting you to enter a Username and Password. Just select OK as there are no credentials set from the factory. The Line 1 Settings (serial settings) are usually set at the factory as follows:

> RS232, 57600, 8, None, 1, None

If these are not correct then you can select Serial Settings and make the necessary changes. Do not forget to choose Apply Changes to save all new settings.

If you have altered settings and are unsure if you are correct, then you can reset (Apply Defaults) the adapter fully. You will then need to setup the Serial Settings as shown below.

> Remember to select Apply Settings when making any changes!

LAN Adapter Serial Settings

Channel 1

☐ Disable Serial Port

Port Settings

Protocol: RS232   Flow Control: None

Baud Rate: 57600   Data Bits: 8   Parity: None   Stop Bits: 1

Pack Control

☐ Enable Packing

Idle Gap Time: 12 msec

Match 2 Byte Sequence: ○ Yes ◉ No   Send Frame Immediate: ○ Yes ◉ No

Match Bytes: 0x 00   0x 00 (Hex)   Send Trailing Bytes: ◉ None ○ One ○ Two

Flush Mode

Flush Input Buffer		Flush Output Buffer	
With Active Connect:	○ Yes ◉ No	With Active Connect:	○ Yes ◉ No
With Passive Connect:	○ Yes ◉ No	With Passive Connect:	○ Yes ◉ No
At Time of Disconnect:	○ Yes ◉ No	At Time of Disconnect:	○ Yes ◉ No

Installing System Doors in Remote Locations

It is possible to connect some or all of your doors in a remote building or location and maintain them as one overall system. The doors are managed and communicated with over the world-wide-web using our LAN-IP-485-TB Adapters.

Router & Port Forwarding Considerations

You can connect multiple or single doors to be cable networked using a LAN Adapter plugged into a router or network switch in a remote location over the internet. You will need to know the fixed public IP address of the remote location and setup a port forward (10001) in that router to the LAN-IP-485-TB Adapter IP address. Please specify the IP address in the format e.g. WEB 92.168.177.234 or WEB 92.168.177.234:1001 for the door definition in the software.

Multiple Adapters at Remote Locations

If you have multiple LAN-IP-485-TB Adapters in any one remote building or location, you can and must, provide unique port numbers for them (i.e. 10001, 10002, 10003 ...). In order to change the port number for a single LAN-IP-485-TB Adapter you must use the LAN-IP-485-TB Device Installer Utility as described earlier and reprogram the port numbers they listen on accordingly.

WebAdmin Server & Remote Management

Your single installation of the software includes built-in capability for operating and managing your site installation remotely. You can manage your site from any PC inside and outside of your building, through any web browser or on portable devices such as tablets and smart-phones.

Working Over The Internet

It is possible with the correct infrastructure, to open up the ability to access the sites Web Administration Console from any external internet enabled device from anywhere in the world. In order to achieve this, the host computer that is actively running the software, must be connected to the internet and be able to accept incoming remote connections through an opened port of '4001'. In reality this is done by your router switch device that is connected to your ISP and setting up a port-forward for port 4001 to the access control machine IP address. Remote users would then navigate remotely using your ISP generated IP address (external IP address) and the port number 4001. This can be a complicated topic and it is recommended that you contact Technical Support if you are unsure in anyway.

Starting the WebAdmin Server at Boot Time

In order to implement a reliable and permanently reachable remote connection you may want to observe and implement the following modifications to the main PC running the software:

Windows Start-up Group - navigate to the Solo folder in the root of your HDD and find the application SoloServer.exe. Create a shortcut for this and add to your windows start-up group.

Internal IP Address - make sure that the main PC running the software has a fixed internal IP address so it does not change when rebooted.

External IP Address - if you wish to connect to your installation from remote web browsers, ensure that you have a fixed external IP address from your ISP.

Create a Port Forward - you will also need to create a port forward for port number 4001 to the fixed IP address of the main PC running the software.

Private Security Key Coded Access Credentials

In door access control its is important to maintain the security and integrity of validated cards and key-tags in issue. For this end, we have our range of PSK coded credentials. These specially coded credentials are recommended as they help combat uncontrolled credentials from being introduced to your system. Additionally, they feature no visible serial numbering markings to avoid remote duplication.

Standard PSK Coding

As standard the default PSK code is supplied from the factory. This code is appended to the unique serial numbering of the card or key-tag and must be present in order to validate and use them with your access control system. Using PSK coded credentials increases the security and integrity of your access control system.

Customer Specific PSK Coding

It is also possible to have your own reserved PSK code for use on your access control site or sites. Please contact sales or support for more information on this.

Disabling PSK System Coding

Whilst we recommend that PSK Coding is used, it is possible to disable this feature across your access control system. Please contact support is you wish to do this.

USB Desktop Enrolment Reader

The USB Desktop Reader simplifies the validation of our range of proximity cards & key-tags in to your system. The simple presentation of a valid proximity card or tag will result in the unique ID number being paced in the relevant field when defining user records.

Installing

The USB Desktop Enrolment Reader can be connected to any Windows computer using the USB cable provided. No other connections or software installation is required.

Testing

In order to confirm correct operation you can open any editor on your computer such as Notepad or Microsoft Word. Simply click on the editable page and present any proximity card or key-tag and you should see a 10 digit number appear on your screen. If this is the case, then the device is working correctly as an extension to your keyboard and wherever you normally type, this device can be used instead.

PSK Coded Access Credentials

If you are using our PSK Coded or Smart Cards & Key-tags you must use the USB Desktop Enrolment Reader.

Secure Login

The USB Desktop Enrolment Reader also permits secure login to the Web Administration Console. This negates the need to enter a username and password, by simply presenting your ID card or key-tag at login.

Access Control System Schematics

The following schematics detail the possibilities for the Access Control System. With the use of our USB-485 and LAN-IP-485 Networking Adapters you can create powerful door networks in the same or different geographical locations.

Access Control Door Equipment

USB-485 Adapter Networking
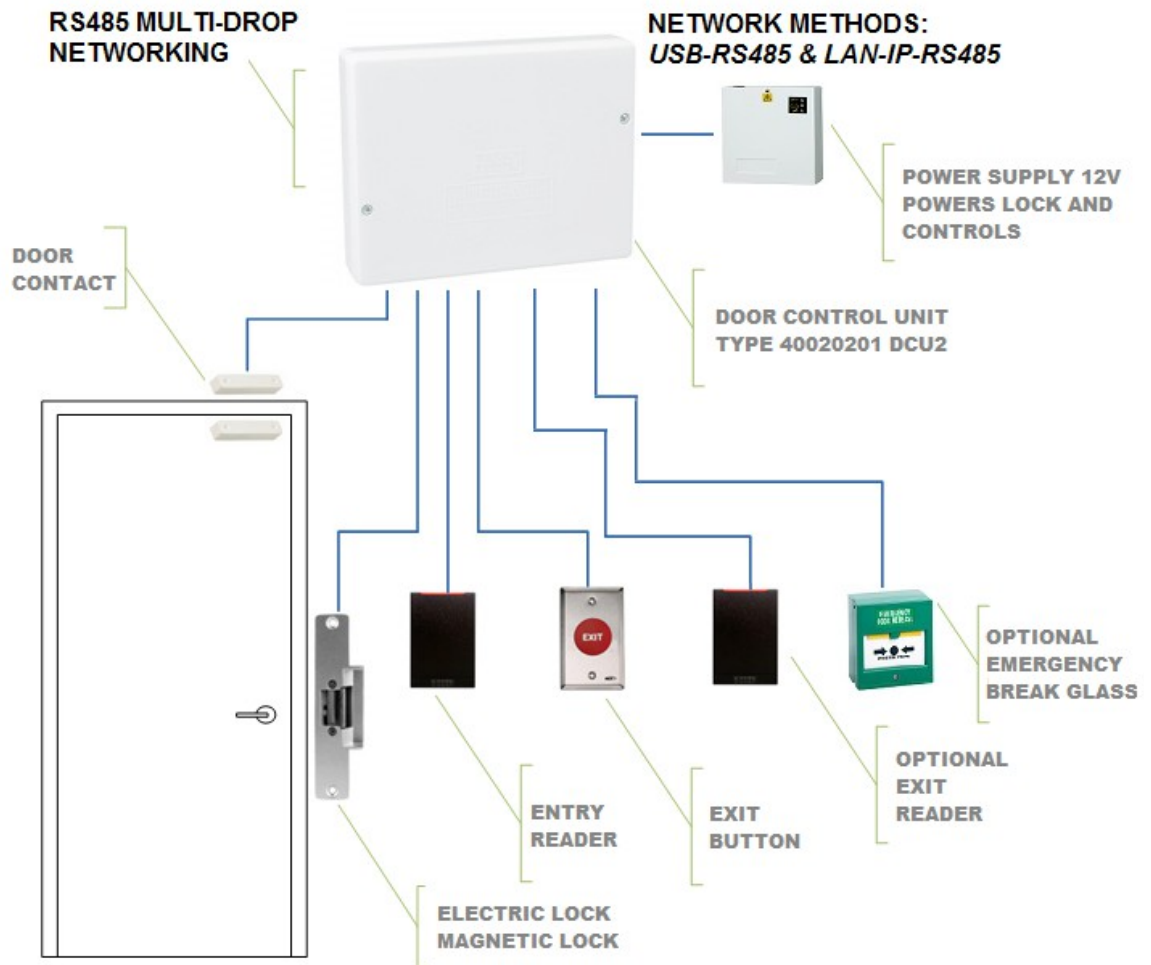
USB-485 ADAPTER NETWORKING CONNECTION
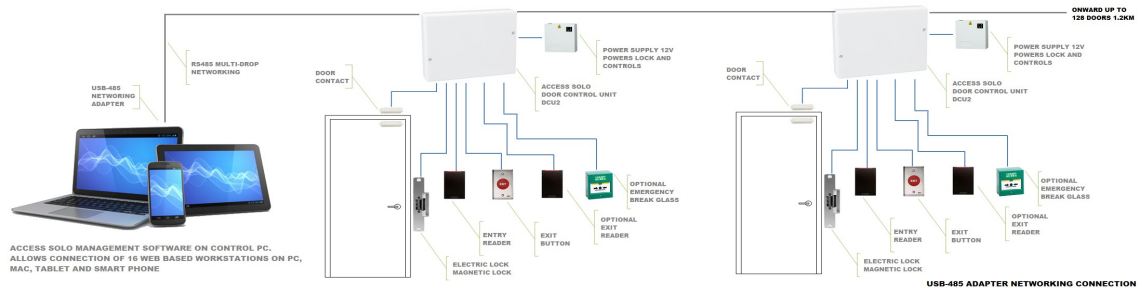
The above scheme represents a basic system connected to the control computer by a single USB-485 Adapter Lead. This lead can be extended to a maximum of 1200M and network up to 128 doors on a single system. You may only have one USB-485 Adapter on a single system. Please observe the correct cable types for the installation as detailed earlier in this manual.

USB-485 + LAN-IP-485 Adapter Networking

LAN-IP-485 & USB-485 ADAPTER NETWORKING CONNECTION
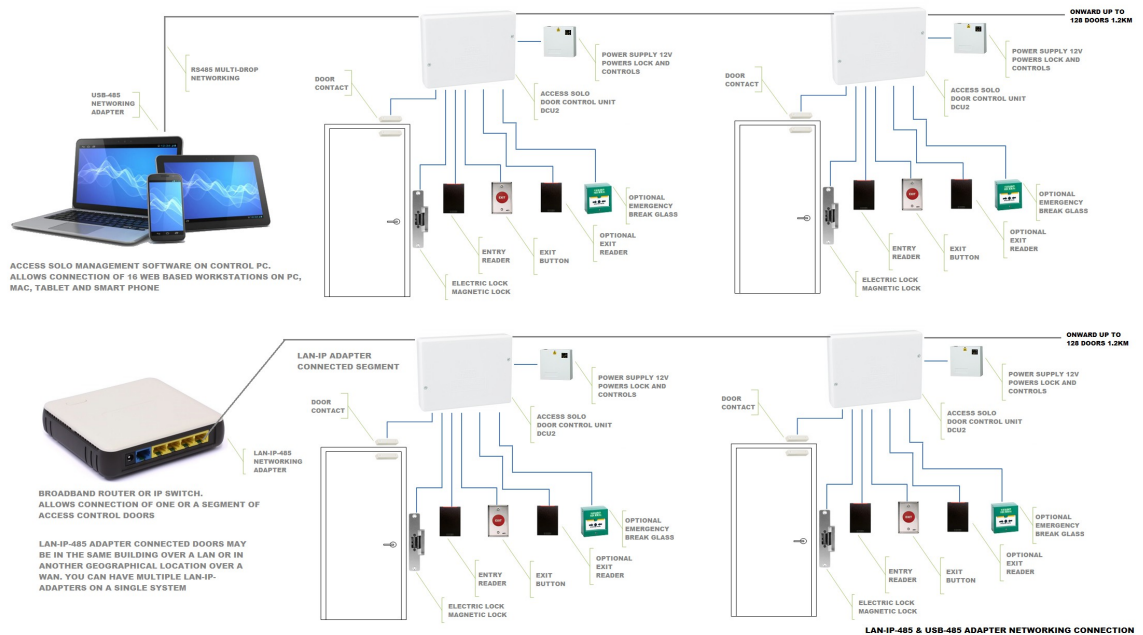
The above scheme represents a more advanced topography, including doors connected by a USB-485 Adapter Lead and further doors connected through LAN-IP connectivity by virtue of the LAN-IP-485 Adapter. It may also be the case that all, some (a segment) or one door may be connected by one or multiple LAN-IP-485 Adapters and a USB-485 Adapter connection may not be used at all. You may have as many LAN-IP-485 Adapters as you wish on your system provided that the maximum number of 128 doors is not exceeded. Please observe the correct cable types for the installation as detailed earlier in this document.

Please use the help menus available from the Web Administration Console to assist with the setup and day-to-day use of the access control system.

MFLEX™ Access Control Software

Once you have completed the installation of the access control hardware and you have tested each door as detailed in this manual, you can install the management software.

Download the WebAdmin Edition Software

In order to install the access control management software you will need to visit our website at https://www.mtecc.co.uk. Once at our website you can visit the Downloads link. Please select and download the latest version of the access control software here.

The latest version will be called MFLEX™ Access Control Software - WebAdmin Edition Installer v5.xx or similar. Click on the link and you should be immediately directed to our secure server where you can download the compressed ZIP version. Make sure your ZIP download is sent to the computer that will have the software installed on it for simplicity and installation speed. Never install the software from a USB memory card, thumb drive or network location.

Installing the Software

Once you have downloaded the latest software in ZIP format to your computer you can right-click on it and select run. The ZIP will open and you can similarly run the .exe installer file. The installer will automatically install all utilities and desktop shortcuts. Once the installer has completed, it will prompt you to confirm the installation of some additional drivers and utilities you may need for your installation, so allow these.

Launching the Software

Once the installer has completed it is recommended that you reboot your computer. Once your computer has restarted you will observe two desktop shortcuts:
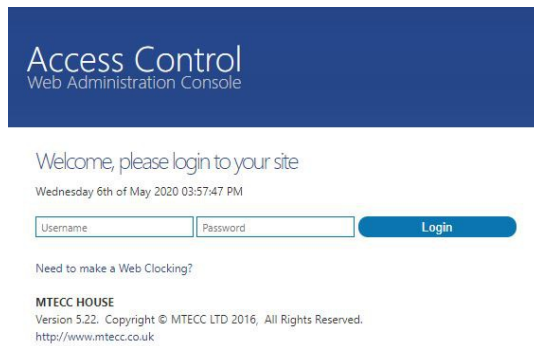

The LAN Adapter Installer shortcut is used at install, find and address our LAN-IP Adapters (not USB) for segments of access control units connected by this method. You can read more on how to do this in the section LAN-IP Device Installer Utility earlier.

The Access Control WebAdmin Start shortcut launches the background communications & web server from a single point. Double-click or right-click and select run from this icon to start the system. After a few moments you will notice the access control and web administration servers will launch with messages. Following this, you should see the default web browser automatically launch with the Web Administration Console running with the Login page ready.

Web Administration Console Login

In order to get started programming the system and gain access to the context help menus inside, you must first login to the system.

As this is a brand new software installation you must use the default username and passwords of 'admin'. Once entered select the Login button. Once these credentials are accepted, the Events screen and main navigation menu will be displayed.

At this point you are not limited to programming the system on this server machine. As you have proved that the system is running you can now use any other computer, tablet or smart device that is connected to this computer. Simply launch the web browser on the new device and enter the local server IP address and port number e.g. 192.168.1.100:4001. To find the WebAdmin Server IP address for all connections, just look to the web browser window on the server machine in the address bar.

Context Help Resource

The Web Administration Console has an integrated help resource that can be viewed in full from the Site | Help menu item. On each page you will see a '?' icon on the right-hand side of the screen, that is used to jump directly to the help topic in context with the page you are on. It is this resource that will take over, to guide you through the configuration and commissioning of all your access controlled doors.