CO U-VALUE MEASUREMENT SYSTEM

U-Value Measurement System User Guide

Installation, Configuration and Downloading Data



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Version 1.2 2 August 2022

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1. Summary

The BTS U-Value Measurement System is a portable tool which is used to measure the thermal transmittance of building elements such as walls, floors and ceilings, helping to identify potential insulation upgrades and to reinforce investment decisions.

The system can record measurements over a number of days or weeks in order to deliver greater accuracy and quantify the in-situ U-value of a building envelope according to the ISO 9869 methodology.



ISO 9869 U-Value Measurement

Highly sensitive data logger and heat flux plates combined with RTD temperature sensors makes the system ISO 9869 compliant. The benefits of making the direct measurement of in-situ U-values more accessible include:

- Understand baseline performance and better target investment in insulation upgrades
- Measure during works and on early completions to check that desired outcomes are being achieved
- Quantify delivered actual performance, stating the true energy, running cost, CO₂ savings and fuel poverty impact delivered by energy efficiency programmes
- Conduct quality assurance testing and establish a culture of accountability
- Save time, costs and improve quality by identifying issues early and reducing late-stage remedial action

2. System Components

The U-Value Measurement System includes the following components:

| | Data Association Lagran | |
|--|--|--|
| To and the second states of the second secon | Data Acquisition Logger1 x Novus FieldLogger 512K1 x Mini-USB cable240V ACSupports up to 8 channels | |
| NUKSEFLUT NUKSEFLUT V V V V V V V V V V V V V | <u>Heat Flux Plates</u> 2 x Hukseflux HFP01 5m lead | RED side facing out BLUE side on wall |
| | Internal Surface Temperature Sensors 2 x RTD surface sensor including self- adhesive protective cap 1/3 DIN (Class AA), 3-wire PT100 5m PVC lead | WHITE cable |
| | External Surface Temperature Sensor 1 x RTD surface sensor including self- adhesive protective cap 1/3 DIN (Class AA), 3-wire PT100 10m PVC lead | WHITE cable (optional extra) |
| | Internal Air Temperature Sensor 1 x RTD probe sensor 1/3 DIN (Class AA) 5m Silicone lead | PINK cable |

| | External Air Temperature Sensor | BLACK cable | |
|--|--|-------------|--|
| | 1 x RTD probe sensor | | |
| | 1/3 DIN (Class AA) | | |
| | 10m PVC lead | | |
| | 4G Modem | | |
| A STATE OF THE STA | 1 x Teltonika TRB140 1 x Micro-USB cable | | |
| | 1 x Allen key for inserting SIM card | | |
| 4. | 24V DC | | |
| | * Requires SIM card and VPN for remote access | | |
| | Power Cable | | |
| | 1 x 5m UK power lead | | |
| | IEC C13 to UK plug | | |



www.buildtestsolutions.com O

Wiring Diagram

| Channel | | 1 | | | 2 | | | 3 | | | 4 | | | 5 | | | 6 | | | 7 | | | 8 | |
|----------|----|--------|-----|---|--------|-----|----|--------|-----|----|--------|----|----|----|----|-----|-------|------|-----|--------|----|-----|--------|-----|
| Sensor | He | at Flu | x 1 | S | urface | e 1 | He | at Flu | x 2 | S | urface | 2 | | - | | Ext | Surfa | ce * | Int | Air Te | mp | Ext | Air Te | emp |
| Polarity | - | ÷ | G | - | + | G | - | + | G | - | + | G | - | + | G | - | + | G | - | ÷ | G | - | + | G |
| Port | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| Wire | | | | | | | | | | | | | _ | | | | | | | | | | | |

* If included with kit

3. Requirements & Limitations ——

The U-value Measurement System can be used to measure heat flow (Q) and U-values of suitable external walls, floors or ceilings subject to the following requirements and limitations:

• Heated Envelope

The system is designed to be in installed in the heated envelope of a building. This means that the heat flux plates are attached to the internal surface of walls or ceilings.

• Minimum 5°C Temperature Difference

A minimum of 5°C (ideally 10°C) mean temperature difference between the internal and external ambient temperatures is required to produce an accurate U-value. The lower the temperature difference, the longer it will take to produce a valid U-value measurement.

• Minimum 72 hrs Measurement

The system must be left in-situ for a minimum of 72 hours. To produce a valid ISO 9869 U-value may take anywhere up to 2 weeks depending on conditions and the thermal mass of the building element being measured.

Wall Orientation

Avoid measuring a surface that receives a lot of solar gains. Where possible, use a North facing, well sheltered or shaded wall.

Access to Outside

The external air and surface temperature sensors need to be routed outside. Place the system within reach of an operable window that will allow the sensor cables to bypass the window seal.



4. Preparation & Installation —

To enable a successful measurement, the following procedure MUST be adhered to:

4.1. Find suitable measurement location

Find a suitably large area of wall or ceiling that will not cause obstruction to others. A power outlet and operable window should be located within easy reach of where the system will be situated.

4.2. Check surface using thermal camera

Prior to attaching sensors, the external surface being measured should be checked using an infrared thermal camera to make sure there are no heating pipes buried in the wall or other sources of heat which will adversely affect the measurement.

4.3. Attach internal sensors

Once a suitable location has been identified, select the best mounting option for the heat flux plates. For walls, we recommend using thermal paste and affixing the heat flux plates using masking tape. For ceilings, we recommend using double sided carpet tape. See Section 5 for more information.

4.4. Attach external sensors

Route external sensors via a window/door or other possible mechanism so that they are exposed to the external ambient conditions. See Section 5 for more information.

4.5. Tidy cables

Ensure all excess cable is mounted out of the way and will not cause a trip hazard or risk to others.

4.6. Padlock case

The system is powered by a 240V AC supply. The case **MUST** be padlocked when left on its own to prevent risk of electrical shock.



5. Mounting Sensors —

Optimum Layout



- The sensors should be laid out such that the heat flux plate and surface temperature sensors are within close proximity of each other as per the image above.
- The internal air temperature sensor should be mounted as close to the measurement location as feasible. Its location must be representative of the ambient temperature in the room and around the heat flux plate.

The sensor probe should be attached to the wall or other object so that it is a minimum of 10cm away from the wall or ceiling and not being cooled by the surface.



Heat Flux Plates

Attach heat flux plates to the surface using one of the following recommended methods:

| <u>Walls</u> | <u>Ceilings</u> |
|---|---|
| | |
| Tesa 4334 Precision Masking Tape | Tesa 4939 Removable Double-Sided Tape |
| Smear thermal paste* on to the BLUE side of the heat flux plate. Offer up to wall and affix masking tape to the edges of the heat flux plate only. The masking tape should overlap the heat flux plate by a maximum of 1cm leaving the centre of the plate uncovered. | Cut a length of double-sided tape and attach to the BLUE side of the heat flux plate. Peel the backing off and affix the heat flux plate to the ceiling. Use additional masking tape to hold securely if required. |
| Ensure no air gaps exist between t | he heat flux plate and the surface! |
| The RED side of the heat flux plate s | hould always be facing towards you. |

Care should be taken not to damage paintwork when removing the tape. Pull tape away from surface slowly without excess force.

* If thermal paste is not available, basic white toothpaste offers similar thermal properties and can be used as an alternative.



Other Sensors



External Air Temperature

- Route the cable outside via a window or door threshold.
- Attach securely in a well sheltered location so that the sensor is protected from direct sunlight.

If necessary, mount the sensor inside a weather shield or Stevenson screen (not supplied).



External Surface Temperature

If not feasible, the external surface sensor can be omitted and not installed.

- Route the cable outside via a window or door threshold.
- Attach securely to the wall on the direct opposite side of where the heat flux plates are located.

The method of attaching the sensor to an exterior wall will vary depending on the external surface finish. Plumbers Putty or similar provides a secure means of attaching cables directly to brickwork.

6. Configuring the Data Logger ——

Download Software

If this is the first time connecting to the data logger, you must download the FieldLogger Configurator software using the following link:

https://www.novusautomation.com/site/default.asp?Idioma=1&TroncoID=608027&SecaoID=549361&Subs ecaoID=504609&Template=../catalogos/layout_produto.asp&ProdutoID=506190

Enabling Logging

- **6.1.** Connect your laptop to the data logger using the supplied Mini-USB cable.
- **6.2.** Open the FieldLogger Configurator software.
- **6.3.** Click 'Configuration' on the main menu:

| FieldLogger Config | jurator 🔤 | |
|--|------------------------|---|
| | DOWNLOAD | |
| DIAGNOSTICS | PREFERENCES | |
| Information Create and change the configuration of your FieldLogger. Download data and export it to known popular formats. | | |
| Check the Diagnostics screen to quickly access essential informatio | n of your FieldLogger. | • |

6.4. Click 'Read Configuration':

| Fie | eldLogger Configurator | |
|------------------------------|--|---|
| | | |
| 8 | READ CONFIGURATION | |
| | NEW CONFIGURATION | |
| | OPEN CONFIGURATION | |
| formation | الم الح | |
| Create and change the co | nfiguration of your FieldLogger. | |
| Download data and expor | t it to known popular formats. | |
| Check the Diagnostics screet | een to quickly access essential information of your FieldLogger. | |
| | ENGLISH | - |
| 1.6.5.00 | | |

6.5. You will be prompted to connect to the data logger. Pick the 'USB' tab and select the relevant COM port (normally labelled 'FieldLogger') from the dropdown list. Click 'Connect':

| | Connection | |
|--------------------|----------------------------------|---------|
| Ethernet USB R3485 | 3 Interface COM Port: COM3 | |
| Conn | Communication test | L Close |

6.6. The software will present you with a series of configuration screens. Leave everything at the default value and click the 'Next' button:

| Tag | | Clock | |
|---|--|--|--|
| | | PC Date/Time | |
| Equipment Tag | | 14/04/2021 10:43: | 27 |
| FieldLogger | | Current date computer will equipment wit configuration. | and time from this be sent to the ien applying the new |
| art | | Data Daugland by USB E | lash Doine |
| Access Levels | | Data Download by USB H | lash Drive |
| Read parameters | ~ | Enable Download | |
| Lucas barantera a | | Data Priority | |
| | | Earliest Data | 🔘 Latest Data |
| FieldLogger and HM | I parameters might be | Download Period | |
| | | Download All | |
| | | O Period | 10 Day |
| Back | Etherne | t Interface | Next |
| Back Bervices | Etherne TCP/IP | t Interface | Next |
| Back Services Disable Al TCP/IP | Etherne TCP/IP D Get | t Interface | ICP) |
| Back Bervices Disable Al TCP/IP | Etherne TCP/IP P Configur O Get @ Use | the following IP configuration | (Next) |
| Back Back Disable Al TCP/IP | Etherne TCP/IP P Configur O Get © Use | ation P configuration automatically (D) the following IP configuration P Address [192.168.2.2] | HCP) |
| Back Back Disable Al TCP/IP FTP | CEtherne TCP/IP Det © Use Sub-N | ation P Address 192.168.2.2 Revork Mask 255.255.50 | 4CP) |
| Back Back Disable Al TCP/IP FTP SMTP | CEtherne TCP/IP P Configura O Get @ Use Sub-H Standi | t Interface | (CP) |
| Back Back Disable Al TCP/IP FTP SMMP SMMP SMMP SMMP | CP/IP P Configure O Get © Use Standa | t Interface to P Address 192.168.2.2 retwork Maak 255.255.0 ard Gateway 192.168.2.1 | HCP) |
| Back Back Bervices Disable Al TCP/IP FTP FTP SNMP SNMP SNMP MTTP SNMP Modbus TCP | CEthernee TCP/IP IP Configure O Get @ Use Standa DNS Configure | t Interface to following IP configuration P Address 192.168.2.2 etwork Mask 255.255.0 ard Gateway 192.168.2.1 uration | HCP) |
| Back Services Disable All TCP/IIP FTP FTP SMMP SMMP SMMP SMMP Cloud Cloud | Etherne CEP/IP Deconfigure Ocet Oute Sub-H Standi DNS Configure DNS Configure DNS Configure DNS Configure DNS Configure | t Interface the following IP configuration P Address 25.255.05 ard Gateway 192.168.2.1 uration : Deabled | HCP) |
| Back ervices Disable All TCP/IJP FTP FTP SMMP SMMP SMMP Cloud Cloud | CEtherne | ation IP configuration automatically (D) the following IP configuration IP Address IP 25: 255: 255: 0 ard Gateway I9 2: 168: 2: 1 uration I: Disabled DNS configuration automatically IP Address IP Address IP I | HCP) |
| Back Back Brivices Disable Al TCP/IP FTP SMMP SMMP SMMP Cloud Cloud Cloud Cloud Cloud Cloud Cloud Cloud | CP/IP CCP/IP P Configur O Get © Use Sub-N Standi DNS Configu ONS Configu © Use © Use | Adress 192.168.2.1 DNS Server 192.168.2.1 | HCP) |

6.7. Continuing clicking 'Next' until you reach the **Logs** screen. To enable logging, untick 'Logs Disabled':

| A DAME OF THE PARTY OF THE PART | | Step Made | |
|--|---|------------|--|
| (a) Charles March | | Stop Mode | |
| Start Now | | Full mem | ory |
| On a Date/Time | | O Never st | op (wrap around) |
| Starts on 14/04/2021 |]▼ at 10:47:08 🛊 | On a Dat | e/Time |
| O By alarm | | End on | 15/04/2021 at 10:47:08 |
| | | O by alarm | |
| ows Modbus commands to st ows Modbus commands to st | tart logging top logging | | Logging Memory Internal flash |
| ows Modous commands to st ows Modbus commands to st annels Selection Available Channels | tart logging top logging Selected Channel | s | Logging Memory Internal flash SD card |
| ows Modbus commands to st lows Modbus commands to st annels Selection Available Channels HF_1 ST_1 HF_2 | tart logging top logging Selected Channel | s | Logging Memory Internal flash SD card |
| ows Modbus commands to st lows Modbus commands to st annels Selection Available Channels HF_1 ST_1 HF_2 ST_2 ST_2 ST_2 ST_2 ST_2 ST_2 | Selected Channels | s | Logging Memory Internal flash SD card Logging Interval |
| ows Modbus commands to st lows Modbus commands to st annels Selection Available Channels HF_1 ST_1 HF_2 ST_2 ST_2 ST_External AT_Internal | Selected Channels | 5 | Logging Memory Internal flash SD card Logging Interval |
| ows Modbus commands to st lows Modbus commands to st annels Selection Available Channels HF_1 ST_1 HF_2 ST_2 ST_2 ST_2ternal AT_Internal AT_External | Selected Channel | 5 | Logging Memory Internal flash SD card Logging Interval 0 |
| www.modbus.commands.to.st ows.Modbus.commands.to.st innels.Selection Available.Channels HF_1 ST_1 HF_2 ST_2 ST_External AT_Internal AT_External | Selected Channel | s | Logging Memory Internal flash SD card Logging Interval 0 |

6.8. Use the double right arrow button to move all available channels to the 'Selected Channels' list:

| | Stop Mode |
|--|------------------------------------|
| Start Now | Full memory |
| On a Date/Time | O Never stop (wrap around) |
| Starts on 14/04/2021 🗐 🔻 at 10:47:08 🜩 | On a Date/Time |
| O By alarm | End on 15/04/2021 T at 10:47:08 |
| Only by Modbus Command | O By alarm |
| Nows Modbus commands to start logging | Logging Memory |
| allows Modbus commands to stop logging | |
| hannels Selection | Internal flash |
| Available Channels Selected Channel | Is OSD card |
| Available channels Science channel | U SD Card |
| HF_1 ST_1 | |
| | Logging Interval |
| HF_1 ST_1 HF_2 ST_2 ST_2 ST_2 ST_2 ST_2 ST_2 ST_2 ST | Logging Interval |
| HF_1 ST_1 HF_2 ST_2 ST_External AT_Internal AT_External | Logging Interval |
| A Velicible Chainles | Logging Interval |

6.9. Change the 'Logging Interval' to 60 and also tick "(x 1s)" so that the logger logs every **60 seconds** and click 'Next':

| uga biadbieu | | |
|---|---|--------------------------------------|
| art Mode | | Stop Mode |
| Start Now | | Full memory |
| On a Date/Time | | O Never stop (wrap around) |
| Starts on 14/04/2021 | 🗐 🔻 at 10:47:08 🚔 | On a Date/Time |
| O By alarm | | End on 15/04/2021 T at 10:47:08 |
| O Calubu Madhua Cama | | O By alarm |
| Allows Modbus commands to s Allows Modbus commands to s hannels Selection | and start logging stop logging | Logging Memory () Internal flash |
| Allows Modbus commands to s Allows Modbus commands to s hannels Selection Available Channels | start logging stop logging Selected Channels HF_1 ST_1 HF_2 | Logging Memory |
| Allows Modbus commands to : Allows Modbus commands to : hannels Selection Available Channels | start logging stop logging Selected Channels HF _1 ST_1 HF _2 ST_2 ST_2 ST_External AT_Internal AT_External | Logging Memory |

6.10. On the next screen, click the 'Send' button to transmit the settings to the data logger and enable logging:

| Send Configuration to FieldLogger | | |
|--|-----------------|--|
| | Actions | |
| Save Configu | iration to File | |
| File Current configuration file C:\Users\richm\Downloads\Config_Q1S1Q2S2SEAIAE Save to a new file | FLC | |
| 🛻 Back 💾 🥰 | Next | |

If prompted to overwrite loggings, click 'Yes'. If prompted to save configuration to file, click 'No'. 6.11. The Green status light on top of the data logger should now be flashing.

You can now disconnect the USB cable and close the software using the red X button.

Important:

Make cables safe, padlock case and leave the system in-situ for a minimum of 72 hours.



Downloading Data

- **6.12.** Connect your laptop to the data logger using the supplied Mini-USB cable.
- **6.13.** Open the FieldLogger Configurator software.
- 6.14. Click 'Download' on the main menu followed by 'Download Data' on the next screen:

| Field | Logger | Configu | ırator | |
|--|---|--|----------------------|--------------|
| CONFIGURATION | * | | DOWNLOAD | $\mathbf{)}$ |
| DIAGNOSTICS | ~ | \$ 0 | PREFERENCES | 5 |
| Information Create and change the configura Download data and export it to b Check the Diagnostics screen to o | tion of your FieldI known popular for quickly access esse | ogger. rmats. ential information o | if your FieldLogger. | |
| sion 1.6.5.00 | | | ENGLISH | - |

| Download Manager | |
|--|--|
| | |
| | |
| Ð | DOWNLOAD DATA |
| | |
| | DOWNLOAD MANAGER |
| 🗹 Download man | ager in "Wizard" format |
| | الى Back |
| Information | |
| | |
| Modify previously downloade | ed data. |
| Modify previously downloade Download data from FieldLog | ed data. ger memory and export it to popular formats. |



6.15. On the subsequent screen, select 'Download data from a FieldLogger' and click 'Next':

| | Download | l Manager | X |
|------|--|---|---|
| | Where is the data to b | be downloaded located? | |
| < | Download data from a FieldLogger | Data is in the internal FLASH memory or SD card plugged in the FieldLogger. | |
| | O Download data from a USB flash drive | FieldLogger data is in a USB flash drive plugged to the computer. | |
| | O Download data from a SD Card | FieldLogger data is in a SD card plugged to the computer. | |
| | O Download data from a Windows folder | FieldLogger data is in in a computer folder or in a corporative network remote folder. | |
| f−i∈ | ldLogger | | |

6.16. You will be prompted to connect to the data logger. Pick the 'USB' tab and select the relevant COM port (normally labelled 'FieldLogger') from the dropdown list. Click 'Connect':

| | Cor | nnection | . |
|--------------|-----------------------------|----------------------|----------|
| USB Internet | erface COM Port: COM3 | | |
| Connect | Disconnect | C Communication test | Close |

Follow the process through and save the data to a destination folder of your choice.

Allow the software to download the data which may take a few minutes.



6.17. After the data has been downloaded, you will be taken to the **Download Manager** screen. Select 'EXPORT data to a file' and click 'Next':

| Download Manager 🔤 |
|---|
| |
| How do you want to view data? |
| O Show data in TABLE format. |
| O Show data in CHART format. |
| ● EXPORT data to a file. |
| O Create a REPORT with data. |
| Data can be exported to formats readable by SuperView or FieldChart, or to well-known formats like XLS, PDF, CSV or RTF. |
| There is a limit of 8 channels when exporting data to PDF or RTF formats. When exporting to SuperView or FieldChart, the limit is 16 channels. |
| |
| FieldLogger |

6.18. Make sure the database folder is set to the same folder where you saved the data to and click 'Next':

| Download Manager | X |
|--|---|
| | |
| | |
| Select the folder where downloaded data is. | |
| My database folder: | |
| C: \Users\richm\Documents\FieldLogger | |
| Change my database folder | |
| The database folder cannot be a root folder, e.g. C/\. | |
| | |
| | |
| | * |
| | |
| | |



6.19. If not already selected, highlight the serial number of the FieldLogger that you are connected to and click 'Next':

| | Downlo | oad Manager | × |
|-------------------------------------|--------------------------------------|---|---|
| | Select the serial r from which y | number of the FieldLogger ou want to view data: | |
| 1914 1922 1922 1922 | 2058 0106 0107 0109 0115 | Choose one serial number from the list. Each one represents data retrieved from the related FieldLogger. only one serial number can be selected at a time. If the serial number you are interested in is not listed, try going back to the previous screen and select another folder. | |
| FieldL | -ogger | | |

6.20. Either download all data or enter the time period that you would like to download data for:

| | Download Manager 🔤 | | |
|--------------|--|--|--|
| | Do you want to see all available data? | | |
| C | ○ I want to see all available data ● I just want to see data from a given time period Ghoosing a data time period makes download faster. | | |
| | OK, select the time period you want to view. | | |
| | Initial Date: 23/02/2021 ● 19:16:53 ● Final Date: 10/03/2021 ● 16:16:53 ● | | |
| F −i∈ | FieldLogger | | |



6.21. Make sure all channels are marked for export.

Important: change the number of decimal places to '06' before clicking 'Next':

| Dow | nload Manager 🛛 💌 |
|-----------------|--|
| Select th | e channels to be viewed: i Each item in the list represents a FieldLogger channel. i Both chart and table visualization allows user to select up to 16 channels maximum. ii There is a limit of 8 channels when exporting data to POF or RTF formats. When exporting to SuperView or FieldChart, the limit is 18 channels. Choose the decimal places for the channels: |
| Mark/Unmark all | Add DST to records. |
| FieldLogger | |

6.22. Choose a file name to export the data to and click 'OK':

| | Export | |
|--|--------|----------------------|
| Destination Folder C: \Users \richm \Desktop File Name example Eile Formet | | |
| Other formats | | |
| Indude Milliseconds | Mil | iseconds Separator . |



6.23. After the data has been processed, the **Export dialog** will appear. Select 'CSV File' before moving to the 'ASCII Options' tab:

| | example_new] | |
|--|------------------------|-----------------|
| C:\Users\richm\Desktop\e; | ample_1.csv | Select |
| Open file after export | 🦵 Print file aft | er export |
| Export Type Fields Form Formats Options | ats Header & Footer AS | CII Options |
| Export to | | |
| C RTF | C PDF | C MS Excel 2007 |
| | © CSV File | C MS Word 2007 |
| CXML | ⊂ sqL | |
| | | |

6.24. On the 'ASCII Options' tab, change the character used as a CSV separator to a comma ',' instead of the default semi-colon and click 'Start Export':

| Jsers\richm\Desktop\example_1.csv Open file after export □ Print file after export nt Type Fields Formats Header & Footer ASCII Options Z Calculate column width Spacing Encoding SV Options Quote strings Comma Quote '' | |
|---|--------|
| Open file after export | Select |
| nt Type Fields Formats Header & Footer ASCII Opti XT Options Calculate column width Spacing Encoding SV Options Quote strings Quote '' | rt |
| XT Options Z Calculate column width Spacing Encoding SV Options Z Quote strings Comma Quote [" | ons |
| Calculate column width Spacing [Encoding [SV Options Quote strings Quote [" | |
| SV Options Quote strings Quote [" | 1 |
| SV Options Quote strings Quote [" | |
| SV Options Quote strings Quote " | |
| Quote strings Quote [" | |
| Quote " | |
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| | \sim |
| Test | Class |
| 10015 | |

6.25. The export will now start and may take a while. Once complete, the CSV file will be automatically opened in Microsoft Excel (if installed).

At this point, you can close the software by clicking the 'Close' in the dialog box and the red X button on the download screen:

| Download Manager | | | | |
|---|--|--|--|--|
| Select the channels to be viewed: | | | | |
| ✓ AT_External ✓ AT_Internal ✓ HF_1 ✓ HF_2 ✓ ST_1 ✓ ST_2 ✓ ST_External | iii Each item in the list represents a FieldLogger channel. iiii Both chart and table visualization allows user to select up to 18 channels maximum. iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii | | | |
| Mark/Unmark all | Add DST to records. | | | |
| FieldLogger | | | | |



Disabling Logging

- 6.26. Once you have finished measuring U-value, you need to disable logging.
- 6.27. Follow steps 6.1 to 6.6 to connect to the data logger and reach the Logs screen.
- 6.28. On the Logs screen, tick 'Logs disabled':

| | Stop Mode |
|---|--|
| Start Now | Full memory |
| On a Data Tima | Never stop (wrap around) |
| Starte of 14/04/2021 | On a Date/Time |
| O Ru alarm | End on 15/04/2021 at 10:47:08 |
| Oby alarm | O By alarm |
| Only by Modbus Command | |
| Allows Modbus commands to stop logging | Logging Mentory |
| Allows Modbus commands to stop logging Channels Selection Available Channels HF_1 ST_1 | Channels O SD card |
| Allows Modbus commands to stop logging Channels Selection Available Channels HF_1 ST_1 HF_2 ST_External AT_Internal AT_External | Channels Channels Channels Cogging Memory Interval Cogging Interval Channels Chan |

6.29. Click 'Next' and then 'Send' the settings to the FieldLogger:

| Send Configuration to FieldLogger | | | | |
|---|-----------------|---------|--|--|
| | Actions | | | |
| Save Config | uration to File | Actions | | |
| C:\Users\rightrightrightrightrightrightrightright | e.flC | Save | | |
| 🛑 Back 💾 🥰 | e 🗙 | Next | | |

You can now safely turn off power to the U-value Measurement System and remove all sensors.

Contact

enquiries@buildtestsolutions.com www.buildtestsolutions.com



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