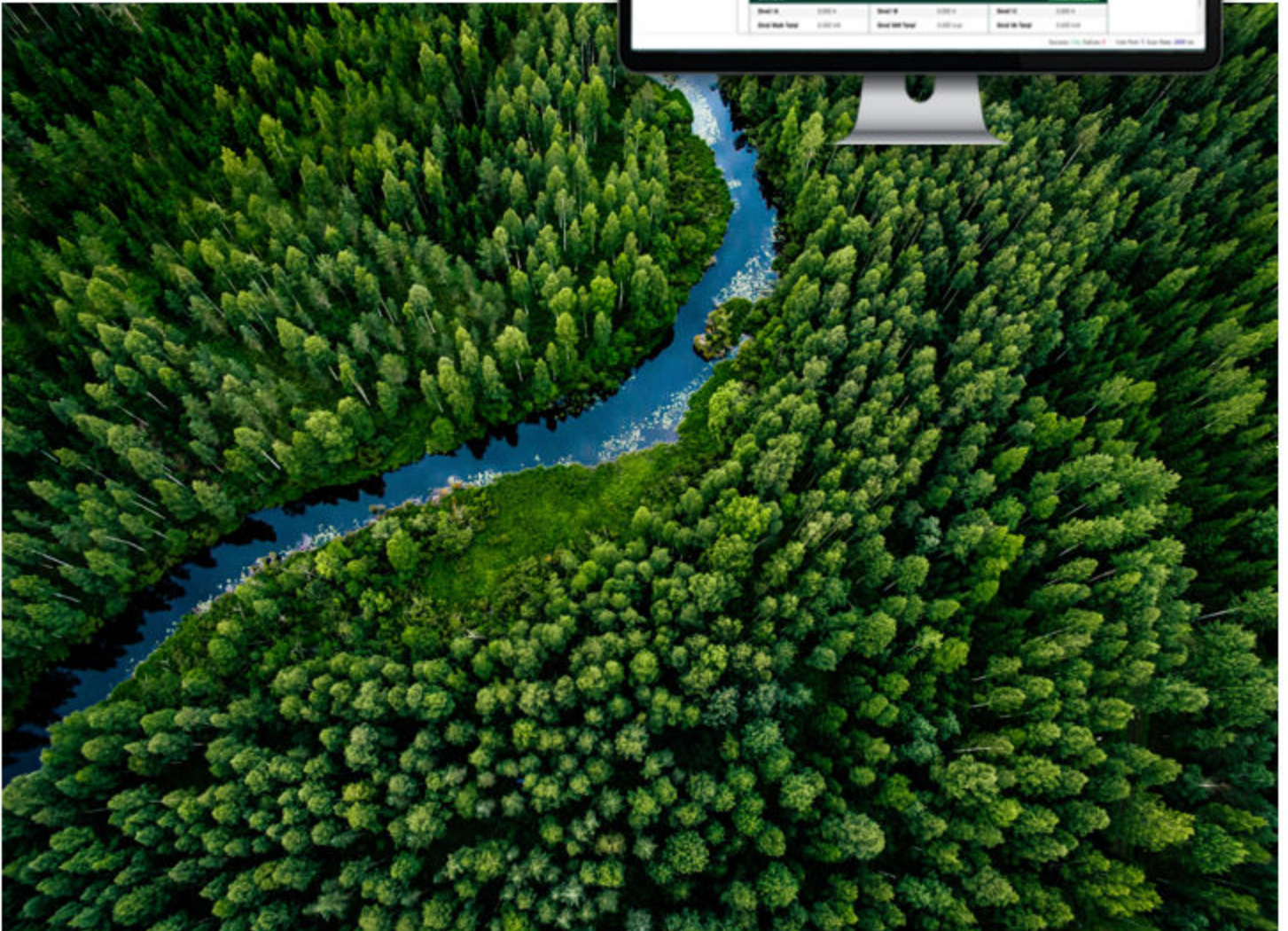
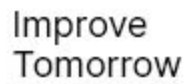


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User manual



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1. About DEIF Multi-instruments SW

DEIF Multi-instruments SW is a PC-based utility software application for the Windows operating system. It can be used to read and log data, and to configure and view the multi-instrument settings of the MIB 8000C or MIC-2 MKII.

Some advanced functions are only accessible using DEIF Multi-instruments SW.

1.1 Intended users

The DEIF Multi-instruments SW user manual is intended for designers and operators who need to configure or supervise the system.

The manual primarily focuses on the use of the software with the MIB 8000C multi-instrument.

1.2 Software versions

The information in this document relates to software version 3.71.x

1.3 Warnings and safety

Installing the multi-instrument may involve work with dangerous currents and voltages. Therefore, the installation should only be carried out by authorised personnel who understand the risks involved in working with live electrical equipment.



DANGER!



Hazardous live currents and voltages

Do not touch any terminals, especially the AC measurement inputs as this could lead to injury or death.



DANGER!



Hazardous live currents and voltages

No required preventative maintenance or inspection. Any repair or maintenance of the equipment must be performed by the factory.

1.4 Legal information

Trademarks

DEIF and the DEIF logo are trademarks of DEIF A/S.

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Disclaimer

DEIF takes no responsibility for installation or operation of the equipment. If there is any doubt about how to install or operate the equipment, the company responsible for the installation or the operation of the equipment must be contacted.

DEIF A/S reserves the right to change any of the contents of this document without prior notice.

The English version of this document always contains the most recent and up-to-date information about the product. DEIF does not take responsibility for the accuracy of translations, and translations might not be updated at the same time as the English document. If there is a discrepancy, the English version prevails.

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2. Software installation instructions

2.1 System requirements

- Operating System: Windows version 11.
- Communication: USB 2.0 Type A cable.
- USB to RS-485 converter and associated driver.

Recommended cable

RS-485 communication

High-quality shielded 22 AWG (0.5 mm²) twisted pair or higher.
Overall length of cable connecting all devices should not exceed 1200 m.

NOTE An Ethernet connection is also possible with an MIC-2 MKII with installed TCP/IP Ethernet module. Refer to [Option TCP-IP Ethernet module..](#)

2.2 Install DEF Multi-instruments SW

1. Go to the [DEIF software page for the MIB 8000C](#).
2. Follow the download instructions.
3. Follow the installation instructions.
4. Follow the installation instructions.

NOTE You can also download the software from [the DEIF software page for the MIC-2 MKII](#).

2.3 Connect the RS-485 interface



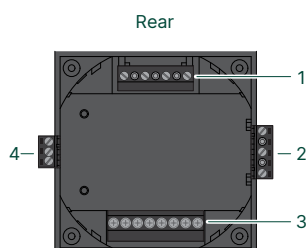
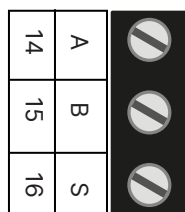
DANGER!



Hazardous live currents and voltages

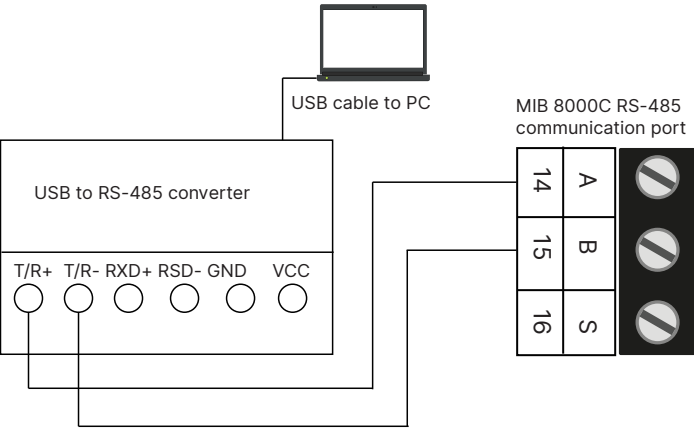
Do not touch any terminals, especially the AC measurement inputs as this could lead to injury or death.

MIB 8000C RS-485
communication port



No.	Item	Notes
1	Voltage input terminal	Used for voltage input
2	Power supply terminal	Control power input
3	Current input terminal	Used for current input
4	Communication terminal	The RS-485 communication port

You will need to use a USB to RS-485 converter:



2.4 Connect the TCP interface

Only for an MIC-2 MKII with a fitted Ethernet TCP/IP module.

To connect the TCP interface to the MIC-2 MKII, refer to [Option TCP-IP Ethernet module](#).

TCP interface settings page

Reading

Setting

General

Independent Wiring

I/O Module

- I/O Module 1
- I/O Module 2

Alarm

Net Module

Custom Read

Data Log

TOU Setting

Device Information

Setting > Net Module

Update

Restore

Reset To Default

IP Setting

DHCP

Static IP

IP Address

000.000.000.000

Subnet Mask

000.000.000.000

Default Gateway

000.000.000.000

Preferred DNS Server

000.000.000.000

Alternate DNS Server

000.000.000.000

Port Setting

Modbus Port

502

Web Port (HTTP)

80

Module

Device Description

2.5 Confirm communication settings

After you have connected the MIB 8000C to the PC using the USB to RS-485 converter, confirm the communications settings are correct.

MIB 8000C default settings

Modbus device address	Baud rate	Parity
1	19200*	Non1 (no parity, 1 stop bit)

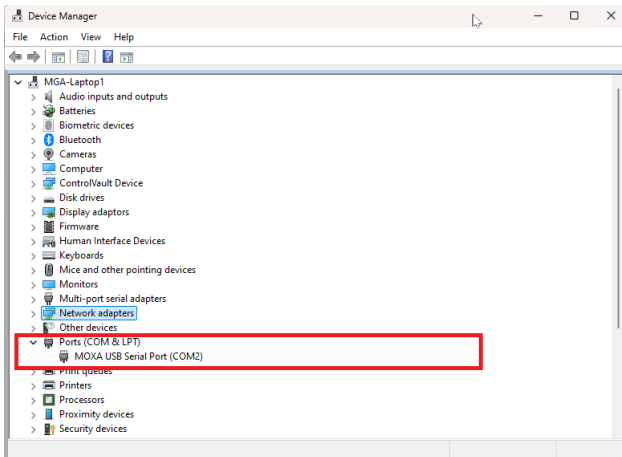
NOTE *If connecting to a meter with no display (DIN rail mount model), the default baud rate of the meter is 9600 on the first power up. After one minute of being powered up, the default baud rate will change to 19200.

Confirm COM port

The COM port must be confirmed on your computer:

- Run Device Manager.

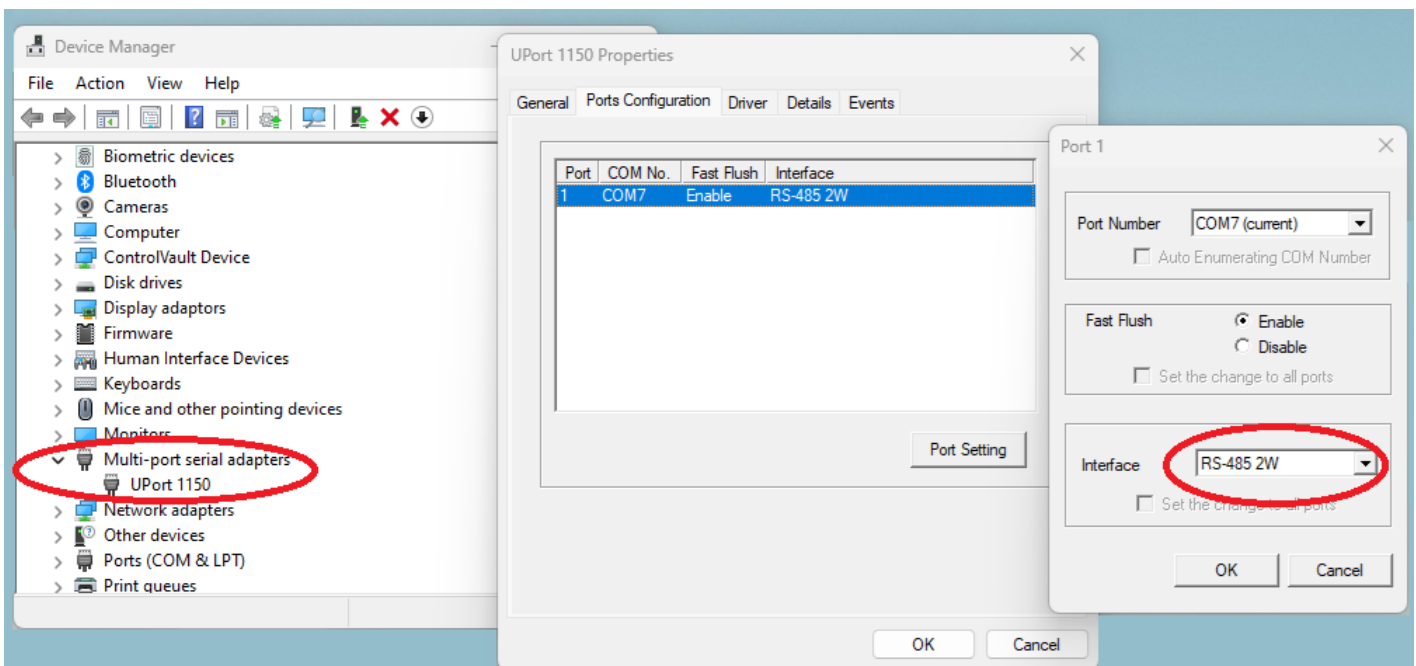
- Under Port (COM & LPT), find the COM port number. Note the COM port number, as you will need this to connect to the software.



NOTE This example shows an installation using a MOXA UPort 1150 converter.

Select the correct communications interface

1. Double-click *Multi-port serial adapters*.
2. Double-click *UPort 1150* or right click *UPort 1150* and select *Properties*.
3. Select interface *RS-485 2W* and click *OK*.

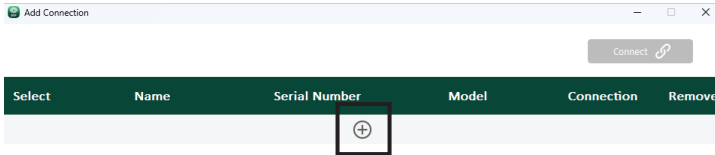


After you have noted the COM port number and selected the correct communication interface, you can run the DEIF Multi-instruments SW application and connect with your MIB 8000C device.

3. Connect for first time

3.1 Create a meter profile

1. Select the *Click to Add New Meter* tab.
2. Select the + symbol in the Add Connection page to generate the meter profile settings.



3. Set up the meter profile with the correct settings.
4. Select *Save* to save the profile.

Profile settings

Meter

Name: My MIB 8000C

Model: MIB 8000C

Connect Way: Modbus RTU

Connection

Timeout: 2000 ms

Scan Rate: 2000 ms

Modbus RTU

Com Number: 7

Slave Address: 1

Baud Rate: 19200

Parity: None 1

Advanced

Tag (Coming Soon)

Notes

Save

Number	Name	Notes
1	Name	Meter profile name must have at least one character.
2	Model	Select <i>MIB 8000C</i> . Select <i>MIC-2 MKII</i> if connecting to a MIC-2 MKII meter.
3	Connect way	Select <i>Modbus RTU</i>
4	Connection timeout	Default is 2000 ms.
5	Connection scan rate	Default is 2000 ms.
6	Com number	Enter port number. It must be the same as the USB port number you noted down earlier.

Number	Name	Notes
7	Slave Address	Default is 1.
8	Baud Rate	Default is 19200.
9	Parity	Default is None1.

3.2 Connect software to meter

1. Return to the Add Connection page.
2. Tick the *Select* box to select the profile.
3. Select*Connect* to connect with the meter.

Add Connection

Connect

3

Select	Name	Serial Number	Model	Connection	Remove
☒	My MIB 8000C	CLD54050355	MIB 8000C	Com 7	

1

2

4

Number	Item	Notes
1	Select	Select the profile to be connected.
2	Add profile	Add a new meter profile.
3	Connect	Connect with meter.
4	Remove	Delete meter profile.

Default opening page

When the connection is made, the software will open on the default opening page:

DEIF Multi-Instruments SW

Connection

Setting

Operation

Help

My MIB 8000C : CLD54050355 (MIB 8000C)

Click To Add New Meter

Reading

Setting

Real-Time Reading

Real-Time Metering

High-Speed Metering

Real-Time Energy

TOU Reading

Dual Source

Harmonic

Sequence Components

Phase Angles

I/O Module

Max/Min

SOE Log

Alarm Log

Data Log

System Status

Reading > Real-Time Reading > Real-Time Metering

Save To File

Basic

Volts AN	0.000 V	Volts AB	0.000 V	I A	0.000 A
Volts BN	0.000 V	Volts BC	0.000 V	I B	0.000 A
Volts CN	0.000 V	Volts CA	0.000 V	I C	0.000 A
Volts LN Average	0.000 V	Volts LL Average	0.000 V	I Average	0.000 A
I N Calculated	0.000 A	I N Measured	0.000 A	I Total	0.000 A

Power

Watt A	0.000 kW	VAR A	0.000 kvar	VA A	0.000 kVA
Watt B	0.000 kW	VAR B	0.000 kvar	VA B	0.000 kVA
Watt C	0.000 kW	VAR C	0.000 kvar	VA C	0.000 kVA
Watt Total	0.000 kW	VAR Total	0.000 kvar	VA Total	0.000 kVA

Advanced

Pwr Factor A	1.000	Frequency	0.000 Hz	Load Type	R
Pwr Factor B	1.000	I N	0.000 A		
Pwr Factor C	1.000	Unbalance V	0.000 %		
Pwr Factor Total	1.000	Unbalance I	0.000 %		

Demand

Dmd I A	0.000 A	Dmd I B	0.000 A	Dmd I C	0.000 A
Dmd Watt Total	0.000 kW	Dmd VAR Total	0.000 kvar	Dmd VA Total	0.000 kVA

Clear Demand

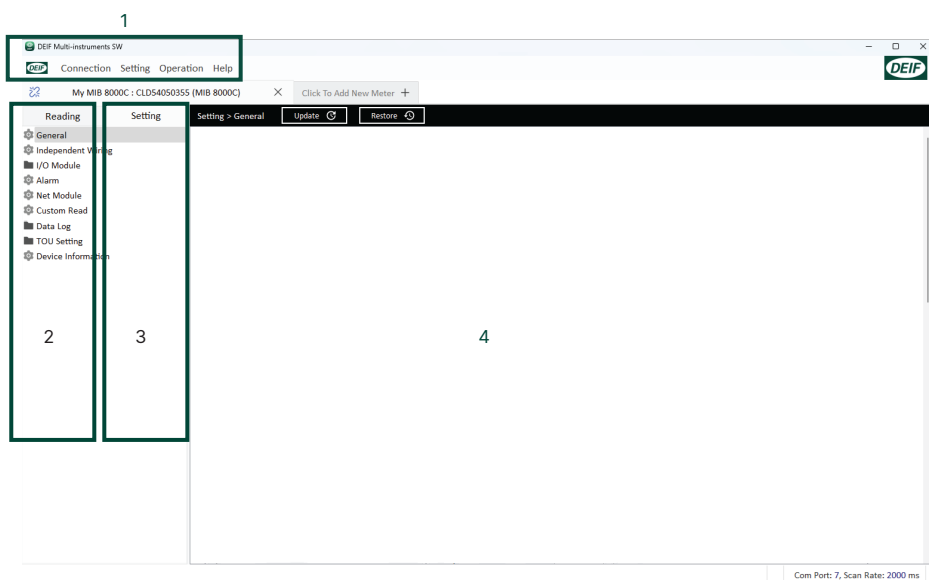
Success: 15%

Failures: 0

Com Port: 7, Scan Rate: 2000 ms

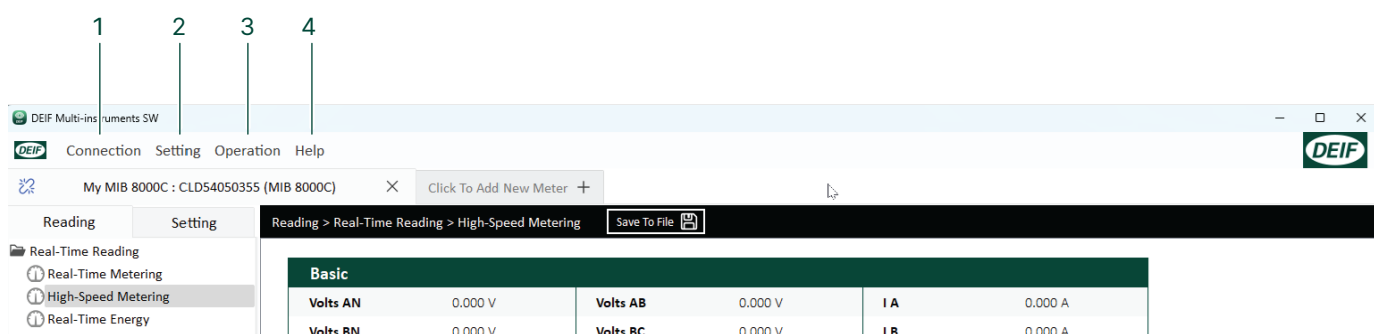
4. Menus and features

4.1 Menus overview



Number	Item	Notes
1	Top bar menu	Main menu for connecting software to device and other operations.
2	Reading side bar menu	Menu for reading and displaying various data and logs.
3	Setting side bar menu	Menu for configuring data and operations.
4	Display view page	The reading data or configuration data and options are displayed in this page.

4.2 Top bar menu



Number	Item	Function
1	Connection	Connect or disconnect. Add or remove connections.
2	Setting	Open General setting. Open Data log setting. Open logging parameters selection menu and other data logging settings.
3	Operation	Export or import configuration.

Number	Item	Function
		Update firmware. Find device (IP address). Calculate pulse constant.
4	Help	Show supported device types and utility software version.

4.2.1 General setting, data log setting and logging parameters

Setting > General setting

For display and data/interaction options.

General Setting

Display

Show Error Message After Failed Action

ON

Data / Interaction

Show Only Available Com Port In Connection Window

ON

Restore All Connections From The Last Time

OFF

Maximum Number Of Read Errors Allowed

3 times

Reset Connection After Read Failure

OFF

Save

Setting > Data log setting

For advanced data log settings.

Data Log Setting

Select	Name	Serial Number	Model	Firmware	Connection	Status
☒	My MIB 8000C	CLD54050355	MIB 8000C	6.21	Modbus RTU	Ready

Data Log Advanced Setting

"Smart Sum" Function

Append an "EOF" line at the end of file

Insert empty data when no response

Allow data refreshing if possible

Wait for the next strict moment

Browse Log Files

Apply

Cancel

Logging parameters selection menu

The user can select the parameters that will be logged, how frequently they will be logged, and save the data log as a file.

To open logging parameters:

1. Tick the Select box (if not already ticked).

2. Select blue menu bar to open the logging parameters selection menu.

Data Log Setting						
Select	Name	Serial Number	Model	Firmware	Connection	Status
☒	My MIB 8000C	CLD54050355	MIB 8000C	6.21	Modbus RTU	Ready

Number	Item	Notes
1	Blue menu bar	Click the menu to open the <i>Select Parameters</i> , <i>Data Log Setting</i> and <i>Action</i> window.

3. Select the parameters to be logged and configure other data log settings.

My MIB 8000C (CLD54050355) Logging Setting

Select Parameters

Real-Time Reading

Real-Time Metering

High-Speed Metering

Real-Time Energy

TOU Reading

Dual Source

Harmonic

Sequence Components

Phase Angles

I/O Module

☒

☒

☒

☒

☒

☒

☒

☒

☒

☒

☒

Volts AN (V)

Volts BN (V)

Volts CN (V)

Volts LN Average (V)

Volts AB (V)

Volts BC (V)

Volts CA (V)

Volts LL Average (V)

I A (A)

I B (A)

I C (A)

I Average (A)

Watt A (kW)

VAR A (kvar)

VA A (kVA)

Watt B (kW)

VAR B (kvar)

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Data Log Setting

Logging Interval

1

min

Create A New File Every

1 Day

Split Files By Category

☐

Log File Name

My MIB 8000C_CLD54050355

_YYYYMMDD

Reset

Log File Folder Location

gram Files (x86)/DEIF Multi-instruments SW/Datalog/

Browse

Action

Passed

Test

Average Logging Time

1914 ms

Maximum Logging Time

1985 ms

Save Logging Setting

4.3 Reading menu

DEIF Multi-instruments SW

DEIF Connection Setting Operation Help

My MIB 8000C : CLD54050355 (MIB 8000C) X Click To Add New Meter +

Reading Setting Reading > Real-Time Reading > Real-Time Metering Save To File

- Real-Time Reading 1
- TOU Reading 2
- Dual Source 3
- Harmonic 4
- Sequence Components 5
- Phase Angles 6
- I/O Module 7
- Max/Min 8
- SOE Log 9
- Alarm Log 10
- Data Log 11
- System Status 12

Number	Item	Notes
1	Real-time reading	Double-click for: Basic, Power, Advanced and Demand values.
2	TOU reading	Double-click for: Current month Prior Month TOU.
3	Dual source	Dual source energy reading and data source log.
4	Harmonic	Double click for: TDH Voltage spectrum Voltage Amplitude spectrum Current amplitude spectrum Current amplitude/angle.
5	Sequence components	Voltage and current sequence and unbalance factor.
6	Phase angles	Phase angles diagram (3LN).
7	I/O module	Double click for: I/O module 1 reading and I/O module 2 reading.
8	Max/Min	Maximum and minimum values with time stamps.
9	SOE log	Latest SEO record with time stamp.
10	Alarm log	Latest alarm record with time stamp.
11	Data log	Double click for: Data log 1, Data log 2, Data log 3 and Data Log 4 records.
12	System status	System status and I/O module status.

4.3.1 Real-time reading

There are three reading pages available: *Real-Time Metering*, *High-Speed Metering* and *Real-Time Energy*.

4.3.2 Real-time metering

Monitor basic, power, advanced and demand data in real time.

Demand calculation types and intervals are configured in the [Setting](#) side bar menu.

Types of demand and calculation methods

Demand type	Calculation
Fixed block	Based on selecting the <i>Window Interval</i> (calculation period), which has a range of 1 to 30 minutes. The meter will calculate and update the demand values at the end of each calculation period
Sliding block	Based on selecting the <i>Window Interval</i> (calculation period), which has a range of 1 to 30 minutes. The meter will average the energy accumulated during this calculation period. Demand value is updated every minute.
Thermal	Based on thermal response, used in thermal demand meters. This method uses a sliding window to update the demand value at the end of each <i>Window Interval</i> .
Rolling block	Based on selecting the <i>Window Interval</i> (calculation period), which has a range of 1 to 30 minutes, and the <i>Calculation Interval</i> (a sub interval). The demand value is updated at each sub interval. The <i>Calculation Interval</i> must be a factor of the <i>Window Interval</i> period. For example, a <i>Window Interval</i> of 15 minutes can have a <i>Calculation Interval</i> of 5 minutes.

1

DEIF Multi-instruments SW

DEIF Connection Setting Operation Help

My MIB 8000C : CLD54050355 (MIB 8000C) X Click To Add New Meter +

Reading Setting

Real-Time Reading

- Real-Time Metering
- High-Speed Metering
- Real-Time Energy

TOU Reading

- Dual Source
- Harmonic
- Sequence Components
- Phase Angles

I/O Module

- Max/Min
- SOE Log
- Alarm Log
- Data Log
- System Status

Reading > Real-Time Reading > Real-Time Metering Save To File

Basic					
Volts AN	0.000 V	Volts AB	0.000 V	I A	0.000 A
Volts BN	0.000 V	Volts BC	0.000 V	I B	0.000 A
Volts CN	0.000 V	Volts CA	0.000 V	I C	0.000 A
Volts LN Average	0.000 V	Volts LL Average	0.000 V	I Average	0.000 A
I N Calculated	0.000 A	I N Measured	0.000 A	I Total	0.000 A

Power					
Watt A	0.000 kW	VAR A	0.000 kvar	VA A	0.000 kVA
Watt B	0.000 kW	VAR B	0.000 kvar	VA B	0.000 kVA
Watt C	0.000 kW	VAR C	0.000 kvar	VA C	0.000 kVA
Watt Total	0.000 kW	VAR Total	0.000 kvar	VA Total	0.000 kVA

Advanced					
Pwr Factor A	1.000	Frequency	0.000 Hz	Load Type	R
Pwr Factor B	1.000	I N	0.000 A		
Pwr Factor C	1.000	Unbalance V	0.000 %		
Pwr Factor Total	1.000	Unbalance I	0.000 %		

Demand Clear Demand					
Dmd I A	0.000 A	Dmd I B	0.000 A	Dmd I C	0.000 A
Dmd Watt Total	0.000 kW	Dmd VAR Total	0.000 kvar	Dmd VA Total	0.000 kVA

2

Success: 40, Failure: 0 Com Port: 7, Scan Rate: 2000 ms

Number	Item	Notes
1	Save To File	Save data as a .csv file.
2	Clear Demand	Clear demand values.

4.3.3 High-speed metering

Users can access the MIB 8000C high-speed readings for monitoring purposes.

Sampling rates	Parameters supported
50 ms	Voltage, current total active/reactive power, frequency
100 ms	Most real-time parameters

Click on the *Save to File* button to save data as a .csv file.

DEIF Multi-instruments SW

Connection Setting Operation Help

My MIB 8000C : CLD54050355 (MIB 8000C)

Click To Add New Meter +

Save To File

Reading

Setting

Real-Time Reading

- Real-Time Metering
- High-Speed Metering
- Real-Time Energy

TOU Reading

- Dual Source
- Harmonic
- Sequence Components
- Phase Angles

I/O Module

- Max/Min
- SOE Log
- Alarm Log
- Data Log
- System Status

Basic

Volts AN	0.000 V	Volts AB	0.000 V	I A	0.000 A
Volts BN	0.000 V	Volts BC	0.000 V	I B	0.000 A
Volts CN	0.000 V	Volts CA	0.000 V	I C	0.000 A
Volts LN Average	0.000 V	Volts LL Average	0.000 V	I Average	0.000 A

Power

Watt A	0.000 kW	VAR A	0.000 kvar	VA A	0.000 kVA
Watt B	0.000 kW	VAR B	0.000 kvar	VA B	0.000 kVA
Watt C	0.000 kW	VAR C	0.000 kvar	VA C	0.000 kVA
Watt Total	0.000 kW	VAR Total	0.000 kvar	VA Total	0.000 kVA

Advanced

Pwr Factor A	1.000	Pwr Factor B	1.000	Pwr Factor C	1.000
Pwr Factor Total	1.000	Frequency	0.000 Hz	I N	0.000 A

IO Module AI

IO31-AI1	0.000	IO31-AI2	0.000
IO32-AI1	0.000	IO32-AI2	0.000

Success: 4, Failure: 0 | Com Port: 7, Scan Rate: 2000 ms

4.3.4 Time of use

Assign different time of use tariffs to specific period of time within a 24-hour period according to your billing requirements.

MIB 8000C will calculate and accumulate energy for the tariffs according to its internal clock and TOU settings.

You can do this for the current month and the prior month.

Accumulated

Parameter	Sharp	Peak	Valley	Normal	Total
Ep_Imp	0.0 kWh	0.0 kWh	0.0 kWh	0.0 kWh	0.0 kWh
Ep_Exp	0.0 kWh	0.0 kWh	0.0 kWh	0.0 kWh	0.0 kWh
Eq_Imp	0.0 kvarh	0.0 kvarh	0.0 kvarh	0.0 kvarh	0.0 kvarh
Eq_Exp	0.0 kvarh	0.0 kvarh	0.0 kvarh	0.0 kvarh	0.0 kvarh
Es	0.0 kVAh	0.0 kVAh	0.0 kVAh	0.0 kVAh	0.0 kVAh

Incremental

Parameter	Sharp	Peak	Valley	Normal	Total
Ep_Imp	0.0 kWh	0.0 kWh	0.0 kWh	0.0 kWh	0.0 kWh
Ep_Exp	0.0 kWh	0.0 kWh	0.0 kWh	0.0 kWh	0.0 kWh
Eq_Imp	0.0 kvarh	0.0 kvarh	0.0 kvarh	0.0 kvarh	0.0 kvarh
Eq_Exp	0.0 kvarh	0.0 kvarh	0.0 kvarh	0.0 kvarh	0.0 kvarh
Es	0.0 kVAh	0.0 kVAh	0.0 kVAh	0.0 kVAh	0.0 kVAh

Maximum Demand

Parameter	Sharp	Peak	Valley	Normal	Total
Watt (Imp)	0.000 kW 2000-01-00 17:44:58	0.000 kW 2000-01-00 17:44:58	0.000 kW 2000-01-00 17:44:58	0.000 kW 2000-01-00 17:44:58	0.000 kW 2000-01-00 17:44:58
Watt (Exp)	0.000 kW 2000-01-00 17:44:58	0.000 kW 2000-01-00 17:44:58	0.000 kW 2000-01-00 17:44:58	0.000 kW 2000-01-00 17:44:58	0.000 kW 2000-01-00 17:44:58
VAR (Imp)	0.000 kvar 2000-01-00 17:44:58	0.000 kvar 2000-01-00 17:44:58	0.000 kvar 2000-01-00 17:44:58	0.000 kvar 2000-01-00 17:44:58	0.000 kvar 2000-01-00 17:44:58
VAR (Exp)	0.000 kvar 2000-01-00 17:44:58	0.000 kvar 2000-01-00 17:44:58	0.000 kvar 2000-01-00 17:44:58	0.000 kvar 2000-01-00 17:44:58	0.000 kvar 2000-01-00 17:44:58
VA	0.000 kVA 2000-01-00 17:44:58	0.000 kVA 2000-01-00 17:44:58	0.000 kVA 2000-01-00 17:44:58	0.000 kVA 2000-01-00 17:44:58	0.000 kVA 2000-01-00 17:44:58
I A	0.000 A 2000-01-00 17:44:58	0.000 A 2000-01-00 17:44:58	0.000 A 2000-01-00 17:44:58	0.000 A 2000-01-00 17:44:58	0.000 A 2000-01-00 17:44:58
I B	0.000 A 2000-01-00 17:44:58	0.000 A 2000-01-00 17:44:58	0.000 A 2000-01-00 17:44:58	0.000 A 2000-01-00 17:44:58	0.000 A 2000-01-00 17:44:58
I C	0.000 A 2000-01-00 17:44:58	0.000 A 2000-01-00 17:44:58	0.000 A 2000-01-00 17:44:58	0.000 A 2000-01-00 17:44:58	0.000 A 2000-01-00 17:44:58

Clear Sharp	Clear Peak	Clear Valley	Clear Normal	Clear Total
-------------	------------	--------------	--------------	-------------

Button	Notes
Clear Sharp	Clear sharp tariff values.
Clear Peak	Clear peak tariff values.
Clear Valley	Clear valley tariff values.
Clear Normal	Clear normal tariff values.
Clear Total	Clear total values.

4.3.5 Dual source

Shows dual source energy readings and a dual source log.

12345

Reading > Dual Source

 Save To File
 Clear Dual Source Energy
 Read Log
 Stop
 Clear Log

Dual Source Energy					
Energy 1 (Grid)	0.0	Energy 2 (Grid)	0.0	Energy 3 (Grid)	0.0
Energy 1 (Generator)	0.0	Energy 2 (Generator)	0.0	Energy 3 (Generator)	0.0

▲ Dual Source Log

Latest Switching Record No.

0

No.	Time Stamp	Switching Mode	Meter Direction	Energy 1 (Grid)	Energy 1 (Generator)

Number	Item	Notes
1	Save to file	Save data as a .csv file.
2	Clear dual source energy	Reset the energy readings.
3	Read log	Show the log record.
4	Stop	Stop logging.
5	Clear log	Clear the log.

4.3.6 Harmonic

There are five pages available: *THD*, *Voltage Spectrum*, *Voltage Amplitude/Angle*, *Current Spectrum* and *Current Amplitude/Angle*.

4.3.7 THD

Shows the total harmonic power reading.

Click the *Save To File* button to save data as a .csv file.

Reading > Harmonic > THD
 Save To File

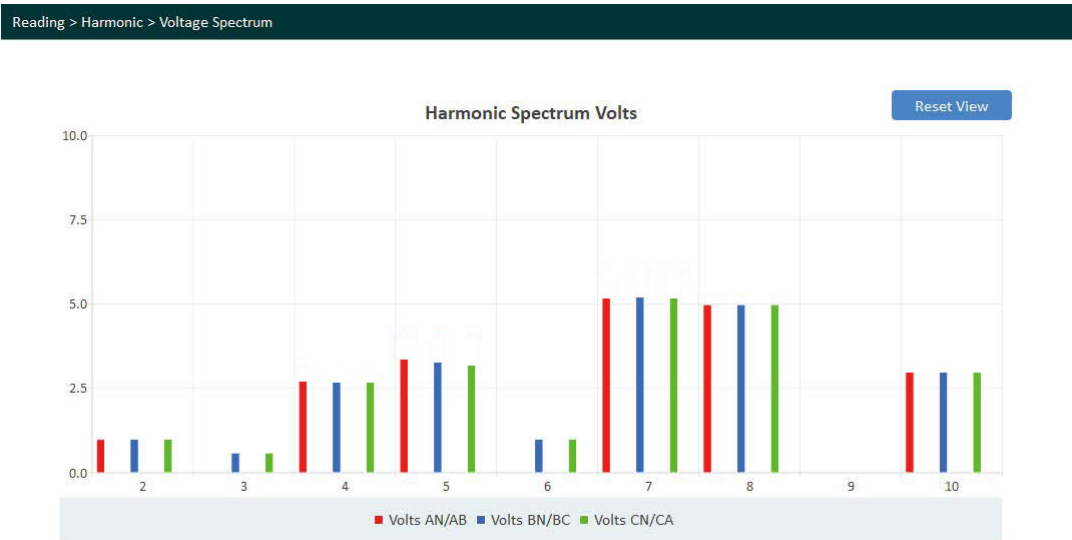
Total			
THD Volts AN/AB	0.000 %	THD I A	0.000 %
THD Volts BN/CA	0.000 %	THD I B	0.000 %
THD Volts CN/BC	0.000 %	THD I C	0.000 %
THD Volts Average	0.000 %	THD I Average	0.000 %

Voltage			
Odd THD V A	0.000 %	Odd THD V B	0.000 %
Even THD V A	0.000 %	Even THD V B	0.000 %
THFF V A	0.000 %	THFF V B	0.000 %
Crest Factor V A	0.000	Crest Factor V B	0.000

Current			
Odd THD I A	0.000 %	Odd THD I B	0.000 %
Even THD I A	0.000 %	Even THD I B	0.000 %
K Factor I A	0.000	K Factor I B	0.000

4.3.8 Harmonic voltage spectrum

Harmonic spectrum volts displayed as graph.



Click on the *Reset View* button to reset the graph view.

4.3.9 Voltage amplitude and angle

Harmonics and their values.

Click on the *Save to File* button to save data as a .csv file.

Reading > Harmonic > Voltage Amplitude/Angle

Save To File

Volts AN/AB

Channel	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th
Harmonic Amplitude	0.000 V	0.000 V	0.000 V	0.000 V	0.000 V	0.000 V	0.000 V	0.000 V	0.000 V	0.000 V	0.000 V	0.000 V
Harmonic Angle	0.000 °	0.000 °	0.000 °	0.000 °	0.000 °	0.000 °	0.000 °	0.000 °	0.000 °	0.000 °	0.000 °	0.000 °

Volts BN/BC

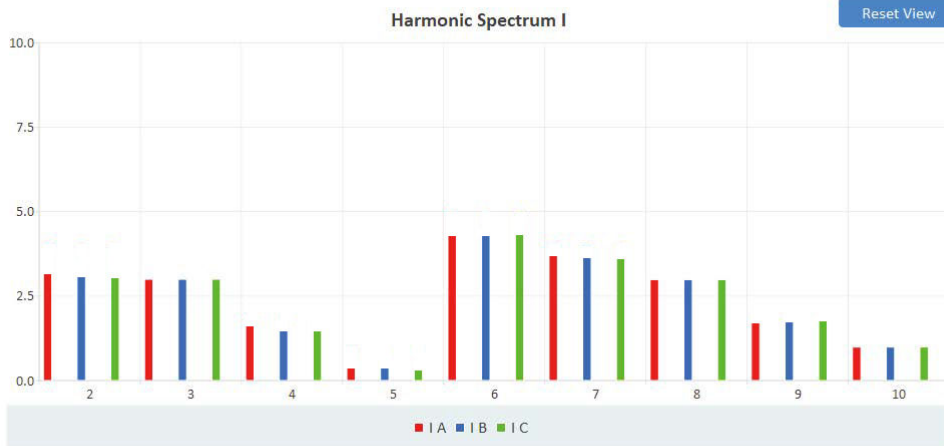
Channel	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th
Harmonic Amplitude	0.000 V	0.000 V	0.000 V	0.000 V	0.000 V	0.000 V	0.000 V	0.000 V	0.000 V	0.000 V	0.000 V	0.000 V
Harmonic Angle	0.000 °	0.000 °	0.000 °	0.000 °	0.000 °	0.000 °	0.000 °	0.000 °	0.000 °	0.000 °	0.000 °	0.000 °

Volts CN/CA

Channel	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th
Harmonic Amplitude	0.000 V	0.000 V	0.000 V	0.000 V	0.000 V	0.000 V	0.000 V	0.000 V	0.000 V	0.000 V	0.000 V	0.000 V
Harmonic Angle	0.000 °	0.000 °	0.000 °	0.000 °	0.000 °	0.000 °	0.000 °	0.000 °	0.000 °	0.000 °	0.000 °	0.000 °

4.3.10 Current spectrum

Harmonic spectrum amps displayed as graph.



Click on the *Reset View* button to reset the graph view.

4.3.11 Current amplitude and angle

Harmonics and their values.

Click on the *Save to File* button to save data as a .csv file.

IA

Channel	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th
Harmonic Amplitude	0.000 A	0.000 A	0.000 A	0.000 A	0.000 A	0.000 A	0.000 A	0.000 A	0.000 A	0.000 A	0.000 A	0.000 A
Harmonic Angle	0.000 °	0.000 °	0.000 °	0.000 °	0.000 °	0.000 °	0.000 °	0.000 °	0.000 °	0.000 °	0.000 °	0.000 °

IB

Channel	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th
Harmonic Amplitude	0.000 A	0.000 A	0.000 A	0.000 A	0.000 A	0.000 A	0.000 A	0.000 A	0.000 A	0.000 A	0.000 A	0.000 A
Harmonic Angle	0.000 °	0.000 °	0.000 °	0.000 °	0.000 °	0.000 °	0.000 °	0.000 °	0.000 °	0.000 °	0.000 °	0.000 °

IC

Channel	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th
Harmonic Amplitude	0.000 A	0.000 A	0.000 A	0.000 A	0.000 A	0.000 A	0.000 A	0.000 A	0.000 A	0.000 A	0.000 A	0.000 A
Harmonic Angle	0.000 °	0.000 °	0.000 °	0.000 °	0.000 °	0.000 °	0.000 °	0.000 °	0.000 °	0.000 °	0.000 °	0.000 °

4.3.12 Sequence components

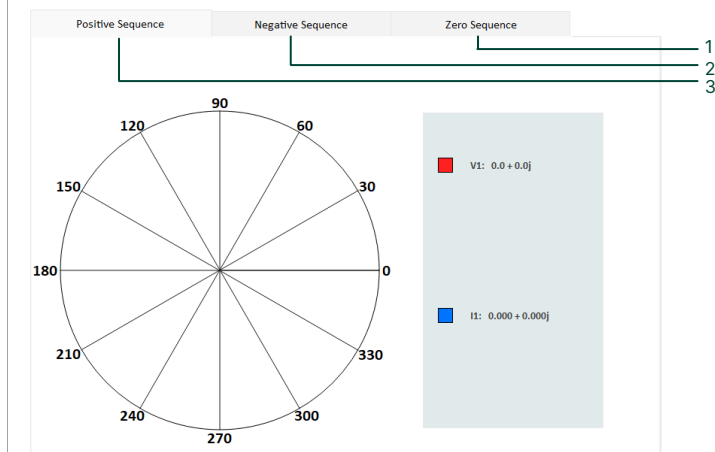
Represent the three-phase system as three single-phase networks: positive sequence, negative sequence, and zero sequence.

Sequence

Parameter	Positive	Negative	Zero
Voltage	0.000 $\angle$ 0.000°	0.000 $\angle$ 0.000°	0.000 $\angle$ 0.000°
Current	0.000 $\angle$ 0.000°	0.000 $\angle$ 0.000°	0.000 $\angle$ 0.000°

Unbalance

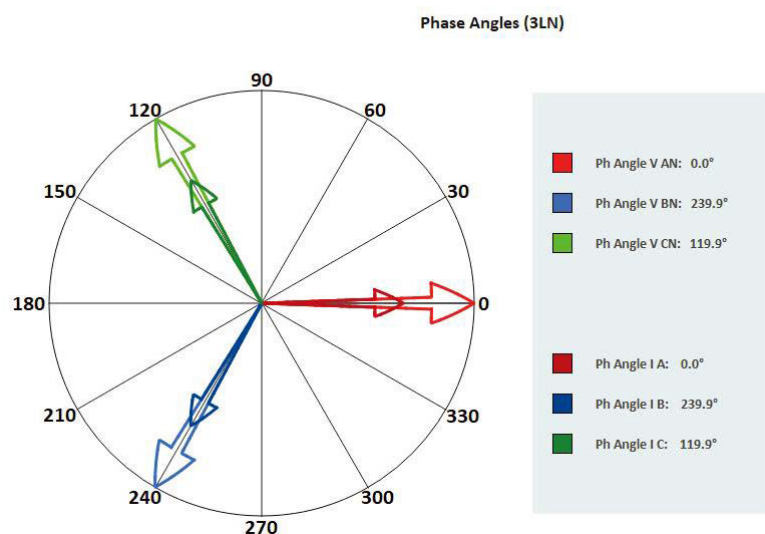
Parameter	Unbalance Factor
Voltage	0.000 %
Current	0.000 %



Number	Notes
1	Click for positive sequence diagram and readings.
2	Click for negative sequence diagram and readings.
3	Click for zero sequence diagram and readings.

4.3.13 Phase angles

Shows the phase angle readings.



NOTE Image is for a three-phase four-wire system where the three phase voltages are 120 degrees apart.

4.3.14 I/O module

There are two I/O pages: *I/O Module 1 Reading* and *I/O Module 2 Reading*.

Only the *I/O Module 1 Reading* page is relevant to MIB 8000C.

4.3.15 I/O Module 1 Reading

I/O module data display page.

There are three variants of the I/O extension module. The page shows all three possible variants. However, only one extension module may be physically attached to the MIB 8000C.

Unattached modules are shown as offline on the page.

Depending on the module that is attached, users can toggle relays, read the status of digital inputs, and read and reset counters.*

Click on the *Save to File* button to save as a .csv file.

To configure the settings of an attached module, use the [Setting side bar menu](#).

AXM-IO1, 6 digital inputs, 2 relay outputs

AXM-IO11 - Offline

RO State

RO 1	OFF	Control	RO 2	OFF	Control
------	-----	---------	------	-----	---------

DI State

DI 1	OFF	DI 2	OFF	DI 3	OFF
DI 4	OFF	DI 5	OFF	DI 6	OFF

DI Counter

DI 1	0	DI 2	0	DI 3	0
DI 4	0	DI 5	0	DI 6	0

Clear DI Counter

Button	Item	Notes
1	Control	Toggle relay state.
2	Clear DI Counter	Reset DI counter.

AXM-IO2, 4 digital inputs and two relay outputs

AXM-IO21 - Offline

AO

AO 1	3.999	AO 2	3.999
------	-------	------	-------

DI State

DI 1	OFF	DI 2	OFF
DI 3	OFF	DI 4	OFF

DI Counter

DI 1	0	DI 2	0
DI 3	0	DI 4	0

Clear DI Counter

AXM-IO3, 4 digital inputs, 2 relay outputs, 2 analogue inputs

AXM-IO31 - Offline

RO State

RO 1	OFF	Control	RO 2	OFF	Control
------	-----	---------	------	-----	---------

DI State

DI 1	OFF	DI 2	OFF
DI 3	OFF	DI 4	OFF

DI Counter

Clear DI Counter

DI 1	0	DI 2	0
DI 3	0	DI 4	0

AI

AI 1	0.000	AI 2	0.000
------	-------	------	-------

4.3.16 Max/Min

This is the maximum and minimum statistics page for real time, demand and TDH parameters, all with a time stamp.

12

Reading > Max/Min

Save To File

Reset Max/Min

Max / Min

Channel	Maximum	Time Stamp	Minimum	Time Stamp
Volts AN	0.000 V	2000-01-00 17:44:58	0.000 V	2000-01-00 17:44:58
Volts BN	0.000 V	2000-01-00 17:44:58	0.000 V	2000-01-00 17:44:58
Volts CN	0.000 V	2000-01-00 17:44:58	0.000 V	2000-01-00 17:44:58
Volts AB	0.000 V	2000-01-00 17:44:58	0.000 V	2000-01-00 17:44:58
Volts BC	0.000 V	2000-01-00 17:44:58	0.000 V	2000-01-00 17:44:58
Volts CA	0.000 V	2000-01-00 17:44:58	0.000 V	2000-01-00 17:44:58
I A	0.000 A	2000-01-00 17:44:58	0.000 A	2000-01-00 17:44:58
I B	0.000 A	2000-01-00 17:44:58	0.000 A	2000-01-00 17:44:58
I C	0.000 A	2000-01-00 17:44:58	0.000 A	2000-01-00 17:44:58

Number	Item	Notes
1	Save To File	Save data as a .csv file.
2	Reset Max/Min	Clear statistics data.

4.3.17 SOE

The sequence of events log page.

The MIB 8000C records events as soon as it has powered up and this data is saved in non-volatile memory. This means the SOE record is not lost if there is a power outage or shutdown of the unit.

The log records up 20 events. If more than 20 events have been recorded, the record with the oldest time stamp will be overwritten

MIB 8000C will only record SOEs when the digital input channel is configured to Status mode. If the digital input channel is set to Pulse mode, the SOE log will not be updated.

Click on the *Save to File* button to save as a .csv file.

Reading > SOE Log

Save To File

SOE Log

Latest SOE Record No0SOE Record FromNone

No.	Time Stamp	DI 1	DI 2	DI 3	DI 4	DI 5	DI 6
1	00-00-00 00:00:00:00	OFF	OFF	OFF	OFF	OFF	OFF
2	00-00-00 00:00:00:00	OFF	OFF	OFF	OFF	OFF	OFF
3	00-00-00 00:00:00:00	OFF	OFF	OFF	OFF	OFF	OFF
4	00-00-00 00:00:00:00	OFF	OFF	OFF	OFF	OFF	OFF
5	00-00-00 00:00:00:00	OFF	OFF	OFF	OFF	OFF	OFF
6	00-00-00 00:00:00:00	OFF	OFF	OFF	OFF	OFF	OFF

4.3.18 Alarm log

The alarm log page.

MIB 8000C records up to 16 alarms. Alarm log records are stored in a cyclic manner, which means the alarm with the latest time stamp is overwritten over the alarm with the oldest time stamp.

When a parameter that was above/below its normal range, returns to its normal range, the alarm log records this value with a time stamp. This means the user can determine for how long a time the parameter was not within its normal range.

The No. sequence in the record does not indicate the order of the alarm events. For example, No. 4 could be the latest alarm record.

Reading > Alarm Log

Save To File

Clear Alarm Log

Alarm Log

Latest Alarm Record No.0

No.	Time Stamp	Alarm Channel	Value	Status	Limit ID
1	00-00-00 00:00:00:00	Frequency	0.000 Hz	IN	0
2	00-00-00 00:00:00:00	Frequency	0.000 Hz	IN	0
3	00-00-00 00:00:00:00	Frequency	0.000 Hz	IN	0
4	00-00-00 00:00:00:00	Frequency	0.000 Hz	IN	0
5	00-00-00 00:00:00:00	Frequency	0.000 Hz	IN	0
6	00-00-00 00:00:00:00	Frequency	0.000 Hz	IN	0

Number	Item	Notes
1	Save To File	Save data as a .csv file.
2	Clear Alarm Log	Clear the record.

4.3.19 Data log

There are four pages available: *Data Log 1 Reading*, *Data Log 2 Reading*, *Data Log 3 Reading* and *Data Log 4 Reading*.

Each data log can be individually configured with individual settings. See [Data log settings](#).

4.3.20 Data Log 1 Reading

Data retrieval page.

1

2

3

Reading > Data Log > Data Log 1 Reading

Save To File

Read Latest 50 Records

1

Read Log

Stop

Data Log 1

Max Records2340Used Records4Record Size28

Window StatusValidFirst Record Time Stamp2000-01-07 21:42:00Last Record Time Stamp2000-01-07 21:45:00

No.	Time Stamp	Frequency (float)	Volts AN (float)	Volts BN (float)	Volts CN (float)
1	2000-01-07 21:42:00	0.000 Hz	0.000 V	0.000 V	0.000 V
2	2000-01-07 21:43:00	0.000 Hz	0.000 V	0.000 V	0.000 V
3	2000-01-07 21:44:00	0.000 Hz	0.000 V	0.000 V	0.000 V
4	2000-01-07 21:45:00	0.000 Hz	0.000 V	0.000 V	0.000 V

Number	Item	Notes
1	Save To File	Save data as a .csv file.
2	Read Log	Start populating page with data.
3	Stop	Stop retrieving data.

4.3.21 Data Log 2 Reading

Data retrieval page.

1

2

3

Reading > Data Log > Data Log 2 Reading

Save To File

Read Latest 50 Records

1

Read Log

Stop

Data Log 2

Max Records0Used Records0Record Size32

Window StatusValidFirst Record Time Stamp2000-01-01 00:00:00Last Record Time Stamp2000-01-01 00:00:00

No.	Time Stamp	I A (float)	I B (float)	I C (float)	I Average (float)	I N (float)
-----	------------	-------------	-------------	-------------	-------------------	-------------

Number	Item	Notes
1	Save To File	Save data as a .csv file.
2	Read Log	Start populating page with data.
3	Stop	Stop retrieving data.

4.3.22 Data Log 3 Reading

Data retrieval page.

1

2

3

Reading > Data Log > Data Log 3 Reading

Save To File

Read Latest 50 Records

1

Read Log

Stop

Data Log 3

Max Records	0	Used Records	0	Record Size	40
Window Status	Valid	First Record Time Stamp	2000-01-01 00:00:00	Last Record Time Stamp	2000-01-01 00:00:00

No.	Time Stamp	Pwr Factor A (float)	Pwr Factor B (float)	Pwr Factor C (float)	Pwr Factor Total
-----	------------	----------------------	----------------------	----------------------	------------------

Number	Item	Notes
1	Save To File	Save data as a .csv file
2	Read Log	Start populating page with data.
3	Stop	Stop retrieving data.

4.3.23 Data Log 4 Reading

Data retrieval page.

Data Log 4 is a dedicated trend log, recording maximum, minimum and average values of the parameters.

1

2

3

Reading > Data Log > Data Log 4 Reading

Save To File

Read Latest 50 Records

1

Read Log

Stop

Data Log 4

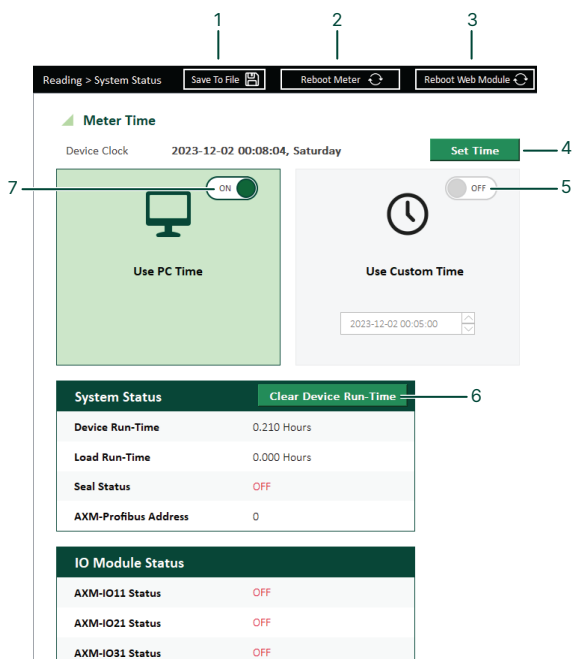
Max Records	18200	Used Records	52	Record Size	180
Window Status	Valid	First Record Time Stamp	2000-01-07 21:34:00	Last Record Time Stamp	2000-01-07 22:25:00

No.	Time Stamp	Volts CN (float) [Avg]	Volts AN (float) [Avg]	Volts BN (float) [Avg]	Volts LN Av
2	2000-01-07 21:35:00	0.000 V	0.000 V	0.000 V	
3	2000-01-07 21:36:00	0.000 V	0.000 V	0.000 V	
4	2000-01-07 21:37:00	0.000 V	0.000 V	0.000 V	
5	2000-01-07 21:38:00	0.000 V	0.000 V	0.000 V	
6	2000-01-07 21:39:00	0.000 V	0.000 V	0.000 V	
7	2000-01-07 21:40:00	0.000 V	0.000 V	0.000 V	
8	2000-01-07 21:41:00	0.000 V	0.000 V	0.000 V	
9	2000-01-07 21:42:00	0.000 V	0.000 V	0.000 V	
10	2000-01-07 21:43:00	0.000 V	0.000 V	0.000 V	
11	2000-01-07 21:44:00	0.000 V	0.000 V	0.000 V	
12	2000-01-07 21:45:00	0.000 V	0.000 V	0.000 V	
13	2000-01-07 21:46:00	0.000 V	0.000 V	0.000 V	
14	2000-01-07 21:47:00	0.000 V	0.000 V	0.000 V	
15	2000-01-07 21:48:00	0.000 V	0.000 V	0.000 V	
16	2000-01-07 21:49:00	0.000 V	0.000 V	0.000 V	
17	2000-01-07 21:50:00	0.000 V	0.000 V	0.000 V	
18	2000-01-07 21:51:00	0.000 V	0.000 V	0.000 V	
19	2000-01-07 21:52:00	0.000 V	0.000 V	0.000 V	
20	2000-01-07 21:53:00	0.000 V	0.000 V	0.000 V	
21	2000-01-07 21:54:00	0.000 V	0.000 V	0.000 V	

Number	Item	Notes
1	Save To File	Save data as a .csv file
2	Read Log	Start populating page with data.
3	Stop	Stop retrieving data.

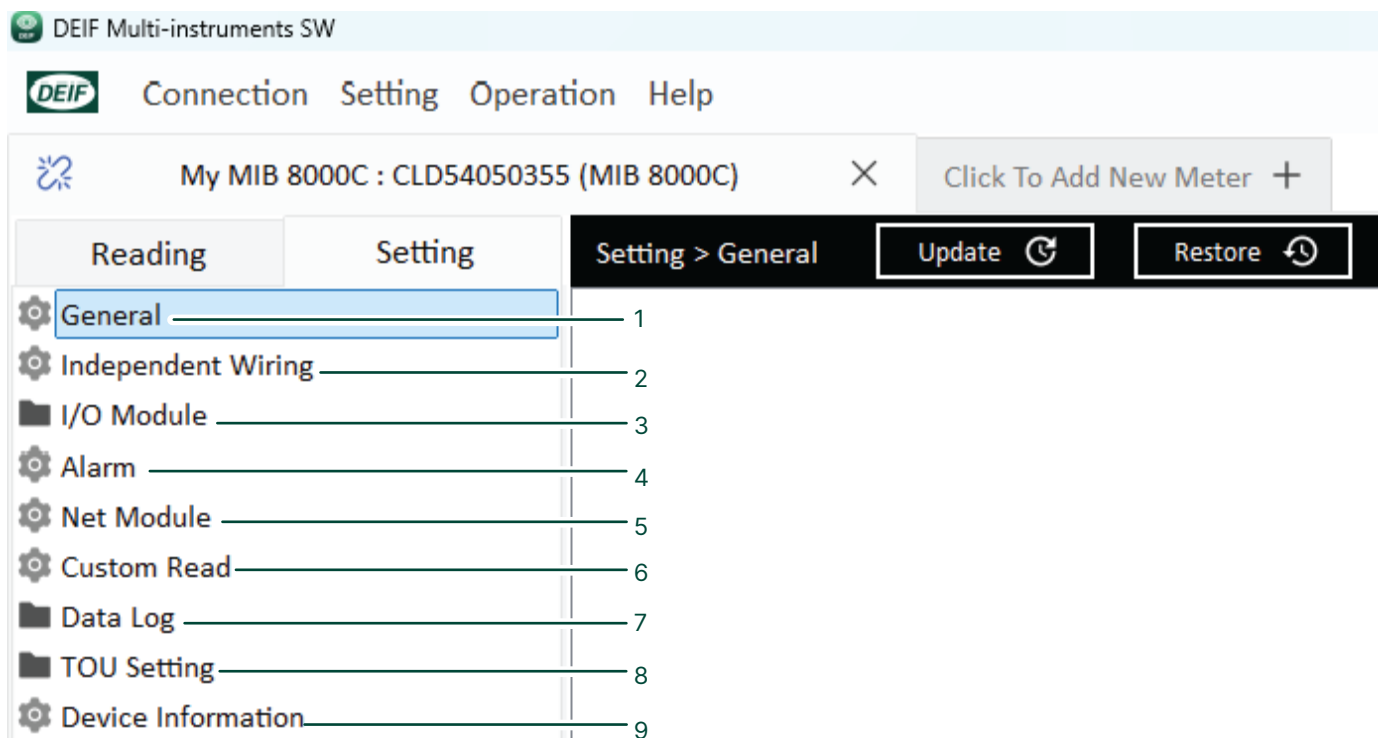
4.3.24 System status

Configure the MIB 8000C date and time setting and run time, and view system and module status.



Number	Item	Notes
1	Save to File	Save data as a .csv file
2	Reboot Meter	Force a reboot of the device. A forced reboot will close the software connection to the MIB 8000C. To re-establish connection with the device: - Click on <i>Click To Add Meter</i> - Tick the <i>Select</i> box of your meter profile. - Click on the <i>Connect</i> button to connect the software.
3	Reboot Web module	Force a reboot of the Web module (if installed). Not applicable to MIB 8000 C.
4	Set Time	Write time to device.
5	Use Custom Time ON	Toggle OFF to ON to manually set device date and time. Format: YYYY-MM-DD HH:MM:SS Automatically switches off the Use PC Time function.
6	Clear Device Run-Time	Reset the run-time of the device.
7	Use PC Time ON	Toggle OFF to ON to enable the device clock to match your PC clock. Automatically switches off the Use Custom Time function.

4.4 Setting menu



Number	Item	Notes
1	Configurable general settings	Double-click to configure: Communication, Wiring, PT and CT ratios, I N Value, I Direction, Real-Time Reading, Demand, Other, DO Energy Pulse Const, Energy Type, Energy Reading, VAR/PF Convention, VAR Calculation Method, SOE Enabled, Load, Non-Standard Options, Security, Dual Source Energy, I Phase Selection, Frequency Average Filter, Advanced Pulse Constant, Modbus Gateway and Phase Order.
2	Independent Wiring	Configure: Independent Wiring Mode, CT Setting, Voltage Channel ID, Summation Channel 1 Config and Summation Channel 2 Config.
3	I/O Module	Double-click to configure: I/O Module 1 and I/O Module 2.
4	Alarm	Configure up to 16 alarm channels.
5	Net Module	Configure interface settings of Net Module.
6	Custom Read	Customised logging.
7	Data Log	Double-click to configure: Data Log 1, Data Log 2, Data Log 3 and Data Log 4.
8	TOU Setting	Double-click to configure: Daylight Saving Time. TOU. Ten Years Holiday.
9	Device Information	Device and I/O information only.

4.4.1 General

The general page allows the user to configure many features, values and settings.

Communication

Configure channel 1 for MIB 8000C or MIC-2 MKII.

Configure channel 2 only for MC-2 MKII with installed optional Ethernet module.

Communication

Channel 1

1 ProtocolModbus

2 Address1

3 Baud Rate19200

4 ParityNone1

Channel 2

5 ProtocolOther

6 Address1

7 Baud Rate38400

8 ParityNone1

Number	Item	Range	Default	Notes
1	Protocol	Modbus, BACNet	Modbus	BACNet is the building automation and control networks protocol.
2	Address	1 to 247	1	The server (slave) ID.
3	Baud Rate	2400 to 115200	19200	Communication speed.
4	Parity	Even Odd, None1, None2	None1	None1 = no parity and 1 stop bit None2 = no parity and 2 stop bits. Even = even parity. Odd = odd parity.
5	Protocol	Other, Web2, Profibus	Other	The Other protocol is typically used with communication modules. The WEB2 protocol has a fixed baud rate of 115200. It is used with communication modules. Profibus is used for high-speed, time-critical fieldbus networks. The default baud rate is 384000.
6	Address	1 to 247	1	The server (slave) ID.
7	Baud rate	4800 to 115200	38400	Communication speed.
8	Parity	Even, Odd, None1, None2		None1 = no parity and 1 stop bit. None2 = no parity and 2 stop bits. Even = even parity. Odd = odd parity.

4.4.2 Independent wiring

2

3

Setting > Independent Wiring

Update

Restore

1

Independent Wiring Mode

ON

CT Setting

CT2

5A

Input Channel 1 CT

5

A

Input Channel 3 CT

5

A

CT42

5A

Input Channel 2 CT

5

A

Input Channel 4 CT

5

A

Voltage Channel ID

Input Channel 1 Matching Voltage

None

Input Channel 2 Matching Voltage

None

Input Channel 3 Matching Voltage

None

Input Channel 4 Matching Voltage

None

Summation Channel 1 Config

☒ Input Channel 1

☒ Input Channel 2

☒ Input Channel 3

☐ Input Channel 4

Summation Channel 2 Config

☐ Input Channel 1

☐ Input Channel 2

☐ Input Channel 3

☐ Input Channel 4

Number	Item	Notes
1	Enable independent wiring mode toggle button.	Enables independent channel configuration. NOTE Several conditions must be met and set before users can configure these channel settings.
2	Update	Write new values to device.
3	Restore	Restore last saved configuration settings.

4.4.3 I/O module

I/O Module 1 page

Configure the installed extension module on this page.

The page shows the configuration settings for all three types of extension modules that can be fitted to the multi-instrument.

The MIB 8000C can only be fitted with one extension module.

The MIC-2 MKII can be fitted with two extension modules.

Setting > I/O Module > I/O Module 1

Update

Restore

AXM-IO11 - Offline

DI Type

DI 1 Type

☐ State
☒ Counter

DI 2 Type

☐ State
☒ Counter

DI 3 Type

☐ State
☒ Counter

DI 4 Type

☐ State
☒ Counter

DI 5 Type

☐ State
☒ Counter

DI 6 Type

☐ State
☒ Counter

DI Pulse Const

Pulse = 1

RO Setting

RO Type

☐ Relay Control
☒ Alarm

Relay Control

Output Mode

Latch

On Time

50

ms

AXM-IO21 - Offline

DI Type

DI 1 Type

☒ State
☐ Counter

DI 2 Type

☒ State
☐ Counter

DI 3 Type

☒ State
☐ Counter

DI 4 Type

☒ State
☐ Counter

DI Pulse Const

Pulse = 1

DO Setting

DO Type

☒ Energy Pulse
☐ Alarm

Energy Pulse

DO 1 Output

None

Pulse Width

80

ms

DO 2 Output

None

Raw Channel of AO

AO 1

IA (A)

AO 2

IA (A)

AO Type

4 ~ 20mA

AXM-IO31 - Offline

DI Type

DI 1 Type

☒ State
☐ Counter

DI 2 Type

☒ State
☐ Counter

DI 3 Type

☒ State
☐ Counter

DI 4 Type

☒ State
☐ Counter

DI Pulse Const

Pulse = 1

RO Setting

RO Type

☒ Relay Control
☐ Alarm

Relay Control

Output Mode

Latch

On Time

50

ms

AI Setting

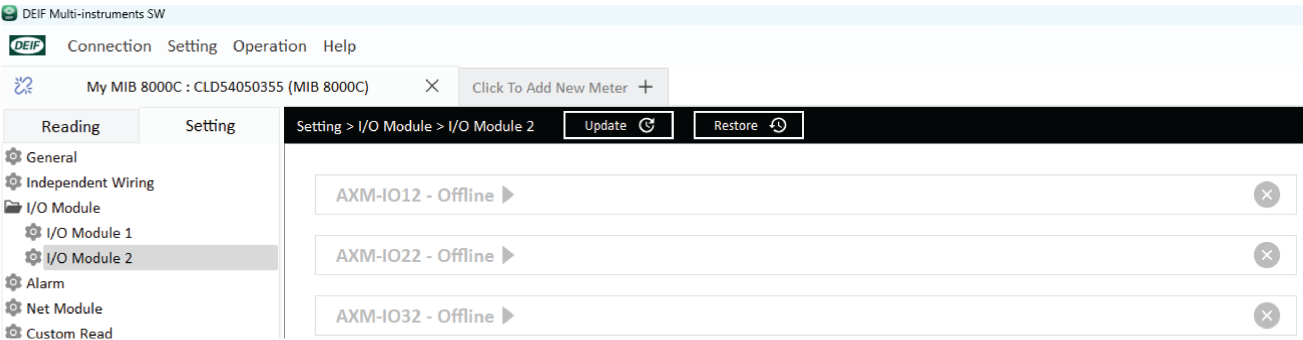
AI Type

4 ~ 20mA

Number	Item	Notes
1	Hide/show	Hide or show configuration settings.
2	Update	Write new values to device.
3	Restore	Restore last saved configuration settings.

I/O Module 2 page

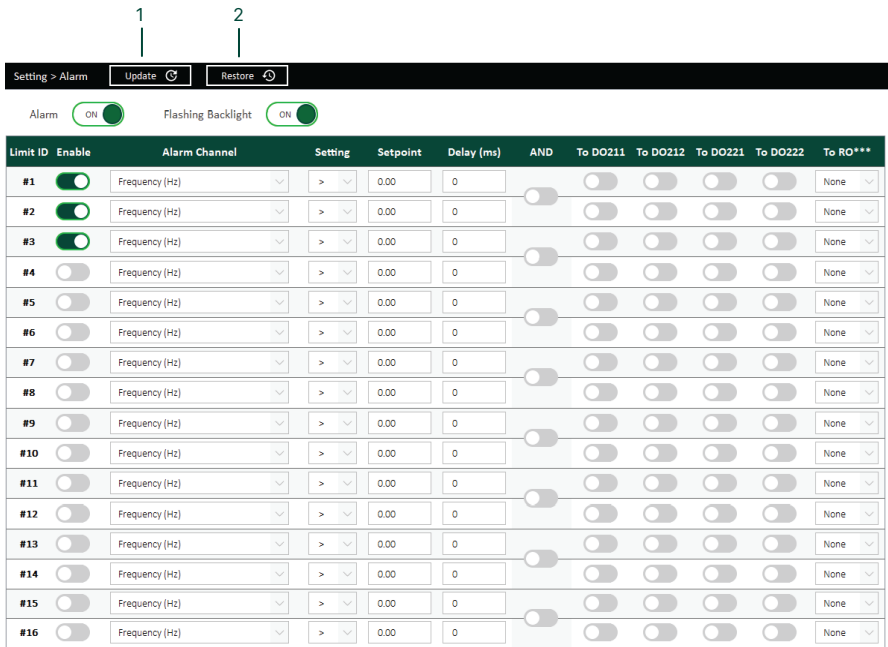
This page only applies to the MIC-2 MKII with two installed I/O modules.



NOTE When a module is fitted (*Online*) the utility software will also show two buttons, allowing you to change a module from Module 1 to Module 2.

4.4.4 Alarm

Configure alarms on this page. A maximum of 16 alarms can be configured.



Setting enabled	Setting not enabled	Notes
		Click to toggle.

Number	Item	Notes
1	Update	Write new values to device.
2	Restore	Restore last saved configuration settings.

Relay output

Alarm configuration also depends on the relay configuration in the [I/O Module](#) page.

RO Setting

RO Type	Relay Control
☒ Relay Control	Output Mode Latch
☐ Alarm	On Time 50 ms

RO Setting	Notes
Alarm	The relay will switch ON or OFF based on the set alarm condition. Some alarms can be set to trigger the relay when their value is over or under a certain condition.
Latch	The relay activation state will remain unchanged until the linked alarm status switches from ON to OFF.
Manual	The alarm will be switched to ON and will only change status if the user changes its status from ON to OFF.

Read the status of the relay output in the [I/O Reading Module 1](#) page.

4.4.5 Net module

Configure the Ethernet module net interface settings on this page.

This page applies only to the MIC-2 MKII multi-meter with installed optional Ethernet module.

For settings, refer to [Option TCP-IP Ethernet module](#).

Setting > Net Module Update Restore Reset To Default

IP Setting

DHCP

☐ OFF

Static IP

Preferred DNS Server

Alternate DNS Server

IP Address

Subnet Mask

Default Gateway

Port Setting

Modbus Port

Web Port (HTTP)

Module

Device Description

See also [General settings](#).

4.4.6 Custom read

Configure a customised log on this page.

1
2

Setting > Custom Read
Update
Restore

Custom Read Parameter Selection

Real-Time Metering (float)

Real-Time Metering (float)

Real-Time Metering (int)

Demand (float)

Demand (int)

Energy

THD

Sequence Component

Phase Angles

DI Counter

AO/AI Raw Value

Average (float)

IN (float)

Watt A (float)

Watt B (float)

Watt C (float)

Watt Total (float)

VAR A (float)

VAR B (float)

VAR C (float)

VAR Total (float)

VA A (float)

VA B (float)

VA C (float)

Add

Remove

Clear All

Volts BN (float)

Volts LN Average (float)

Volts CN (float)

Volts BC (float)

Custom Read Setting

Space Used 8
Space Remained 24

Number	Item	Notes
1	Update	Write new values to device.
2	Restore	Restore last saved configuration settings.

4.4.7 Data log

The MIB 8000C has four data logs which can be configured:

- Data Log 1
- Data Log 2
- Data Log 3
- Data Log 4

Data log	Maximum number of parameters included in log	Notes
1	114	Configurable.
2	114	Configurable.
3	114	Configurable.
4	38	Configurable. Data log 4 is used only as a trending log and records the maximum, minimum and average values of parameters. Updating Data Log 4 does not affect Data Log 1, 2, and 3.

NOTICE

Updating a log with a new configuration

When the update is executed, all three data logs Data Log 1, Data Log 2 and Data Log 3 will be updated. Download and save all logs before changing the configuration.

Data log 1

1

2

Setting > Data Log > Data Log 1

Update

Restore

Data Log Parameter Selection

Real-Time Metering

Real-Time Metering

Demand

Energy

THD

Harmonic Volts AN/AB

Harmonic Volts BN/BC

Harmonic Volts CN/CA

Harmonic I A

Harmonic I B

Harmonic I C

Average (float)

I N (float)

Watt A (float)

Watt B (float)

Watt C (float)

Watt Total (float)

VAR A (float)

VAR B (float)

VAR C (float)

VAR Total (float)

VA A (float)

VA B (float)

VA C (float)

Add

Remove

Clear All

Frequency (float)

Volts AN (float)

Volts BN (float)

Volts CN (float)

Logging Setting

Space Used

8

Space Remained

106

Sectors (99 Remain)

1

Max Record

2340

Logging Interval

1 min

Logging Mode

Start Logging Immediately

No Stop Time (First-in First-Out)

Start Logging Time

No Stop Time (First-in First-Out)

Start From

00:00

Logging Scheduler

Stop at End Time or Till Memory is Full

Start

2000-01-01 00:00:00

End

2000-01-01 00:00:00

Number	Item	Notes
1	Update	Update log settings.
2	Restore	Set to last updated log settings.

Data log 2, 3 and 4

Page layout and configuration procedures are the same as *Data Log 1*.

4.4.8 TOU setting

There are three time-of-use configuration pages: *Daylight Saving Time*, *TOU* and *Ten Years Holiday*.

4.4.9 Daylight saving time

Configure daylight saving time (DST) on this page. The MIB 8000C will automatically adjust its clock according to the DST time setting. At the end of the DST period, the MIB 8000C will return its clock to standard time.

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Setting > TOU Setting > Daylight Saving Time

Update 1 Restore 2

Daylight Saving Time

ON DST Format Format 1 3

Format 1

DST Start

Start Time 01-01 00:00 Adjust Time 30 Minutes

DST End

End Time 01-01 00:00 Adjust Time 60 Minutes

Format 2

DST Start

Start Time January 1st Sunday 00:00 Adjust Time 60 Minutes

DST End

End Time January 1st Sunday 00:00 Adjust Time 60 Minutes

Number	Item	Notes
1	Update	Write new values to device.
2	Restore	Restore last saved configuration settings.
3	Time Format	Select <i>Format 1</i> or <i>Format 2</i> for the update.

4.4.10 TOU

Many if not all utility companies charge their customers using time-of-use (TOU) rates. These are rates based on the time of day energy was consumed.

On this page you can assign up to four different tariffs to specified time periods within the day.

MIB 8000C will calculate and accumulate energy for each of the configured tariffs using its time and date and the TOU settings.

NOTE Scroll down the *TOU Setting* page to see and configure *TOU Holidays* and *TOU Weekends*

The screenshot shows the 'Setting > TOU Setting > TOU' configuration page. At the top, there are three buttons: 'Update' (1), 'Restore' (2), and 'Reset To Default' (3). The main content is divided into several sections:

- General:** Contains an 'Enable TOU' toggle switch (4) and a 'Setting Status' indicator showing 'Valid'.
- Billing & Tariff Setting:** Includes 'Monthly Billing Mode' with 'End Of Month' selected, and 'Tariff' options with 'Sharp', 'Peak', 'Valley', and 'Normal' all checked.
- TOU Seasons:** A table with columns 'Season ID', 'Start Date', 'Schedule ID', and 'Remove'. It contains three rows of data.
- TOU Schedules:** A table with columns 'Schedule ID', 'Number of Segment', 'Edit', and 'Remove'. It contains three rows of data.
- TOU Holidays:** A table with columns 'Holiday ID', 'Date', 'Schedule ID', and 'Remove'. It contains three rows of data.
- TOU Weekends:** Includes 'Weekend Selection' checkboxes for days of the week, a 'Weekend Schedule' dropdown, and an 'Enable Special Weekday Schedule' toggle (8).

Number	Item	Notes
1	Update	Write new values to device.
2	Restore	Restore last saved configuration settings.
3	Reset to Default	Restore default settings.
4	Enable TOU	Toggle ON to enable the time-of-use function.
5	TOU Seasons	Divide the year into a maximum number of 12 seasons, each season is designated with a specific schedule that it operates to.
6	TOU Holidays	Configure up to a maximum of 30 holidays in the TOU calendar, each holiday can be assigned a specific schedule.
7	TOU Schedules	A schedule divides a 24-hour period into segments, each segment is assigned a specific tariff. There can be a maximum of 14 schedules. A schedule can be also be divided into time segments. A single schedule can cover a maximum of 14 time segments.
8	TOU Weekends	Designate specific day(s) of the week as weekends and which schedules apply to weekends.

Configuring TOU settings

Recommended procedure:

1. Set the number of desired tariffs in *TOU*.
2. Configure the schedule(s) in *TDU Schedules* and edit each schedule to define the segments that are included in the schedule.
3. Set the season in *TOU Seasons* and assign the season with the configured schedule.

4.4.12 Device information

Display of device and module information.

Click on the *Save to File* button to save as a .csv file.

Setting > Device Information

Save To File

Device Information	
Serial Number	CLD54050355
Model	MIB 8000C
Firmware Version	6.21
Hardware Version	3.11
CT Specification	5A
Release Date	2024-02-07
Boot Version	FP00301621

IO Module Information					
IO11 Model	N/A	Hardware Version	N/A	Firmware Version	N/A
IO21 Model	N/A	Hardware Version	N/A	Firmware Version	N/A
IO31 Model	N/A	Hardware Version	N/A	Firmware Version	N/A
IO12 Model	N/A	Hardware Version	N/A	Firmware Version	N/A
IO22 Model	N/A	Hardware Version	N/A	Firmware Version	N/A
IO32 Model	N/A	Hardware Version	N/A	Firmware Version	N/A