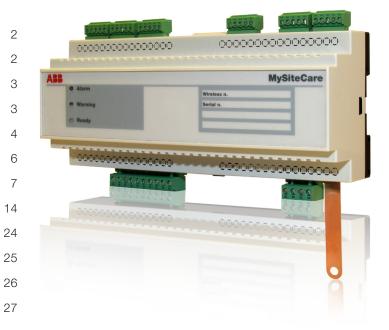
# MySiteCare Operation manual

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### ABB SPA

PPMV Service IT-24044 Dalmine, Italy Telephone: +39 035 695 2600

Facsimile: +39 035 695 2792

# Disclaimer

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# Conformity

The products listed in the document comply with the directive of the Council of the European Communities implemented by the laws of the Member States relating to electromagnetic compatibility (EMC Directive 2004/108/EC) and concerning electrical equipment for use within specified voltage limits (Low-voltage directive 2006/95/EC). Such conformity is the result of tests conducted by ABB in accordance with product standards EN50263 and EN60255-26 for the MEC directive and with product standards EN 60255-1 and EN 60255-27 for the low voltage directive.

# Safety Information



Dangerous voltages can occur on the connectors, even though the auxiliary voltage has been disconnected.



Non-observance can result in death, personal injury or substantial property damage.



Only a competent electrician is allowed to carry out the electrical installation.



National and local electrical safety regulations must always be followed.



MySiteCare must be earthed

# 1. Introduction

The Operation manual contains instructions on how to operate MySiteCare with the proper software tools once it has been commissioned. The manual provides instructions for monitoring, controlling the device. The manual also describes how to identify errors or problems to determine the cause of a fault.

#### Intended audience

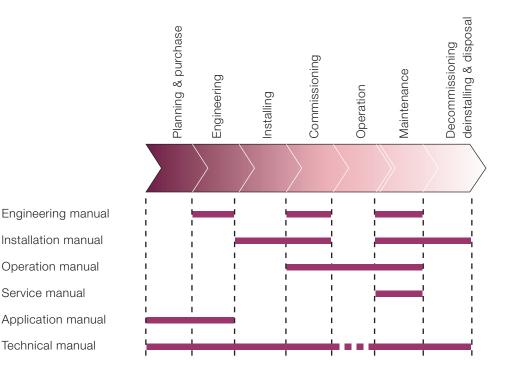
This manual addresses system and service engineers and installation and commissioning personnel, who use technical data during engineering, installation and commissioning, and in normal service.

The installation and commissioning personnel must have a thorough knowledge of circuit-breakers, and a basic knowledge about handling electronic equipment.

### Product documentation set

The Installation manual contains instructions on how to install MySiteCare. The manual describes procedures for mechanical and electrical installation. The chapters are set out in the order in which the device should be installed and connected to the circuit-breaker. The Technical manual contains application and functionality descriptions and includes functions, input and output signals, setting parameters and technical data. The manual can be used as a technical reference during the engineering phase, installation and commissioning phase, and during normal service.

The Operation manual contains instructions on how to configure and monitor the device once it has been commissioned. The manual provides instructions for monitoring, controlling the device and making the required settings. The manual also describes how to locate errors or problems and determine the causes of faults. The service manual contains instructions on how to service the device. The manual also describes procedures for deenergizing, de-commissioning and disposal of the device. The application manual contains application descriptions and setting guidelines divided as to function. The manual can be used to establish when and for what purpose a typical diagnostic function can be analyzed. The manual can also be used when calculating settings, thresholds, etc.



The intended use of manuals in different lifecycles



### Some of the manuals are not yet available.

#### **Revision history**

Document revision/ date	Product series version	History
2012-06-30	1.0	First release
2013-06-30	· 4 ()	Updated to the product version
2014-01-31	4.3	Added Onboard reprogramming paragraphs



Download the latest documents from the ABB web site

#### **Related documentation**

Product series- and product specific manuals can be downloaded from the ABB web site.

#### Symbols



The electrical warning icon indicates the presence of a hazard which could result in electrical shock.



The warning icon indicates the presence of a hazard which could result in personal injury



The caution icon indicates important information or warnings related to the subject discussed in the text. It might indicate the presence of a hazard which could result in damage to software, equipment or property.



The information icon alerts the reader of important facts and conditions.

The tip icon indicates advice on, for example, how to design your project or use a certain function.

Although warning hazards are related to personal injury, it is necessary to understand that under certain operational conditions, operation of damaged equipment may result in degraded process performance leading to personal injury or death. Therefore, comply fully with all warning and caution notices.

# 2. Environmental aspects

# Sustainable development

Sustainability was taken into account from the time product design began and included the pro-environmental manufacturing process, long life, operation reliability and disposal of MySiteCare.

The choice of materials and the suppliers was made in accordance with the EU RoHS directive 2011/65/EU of the European Parliament and of the council of 8 June 2011 on the Restriction of Hazardous Substances in electrical and electronic equipment (RoHS Directive).

MySiteCare complies with the maximum values for lead (Pb), mercury, hexavalent chromium, polybrominated biphenyls (PBB), polybrominated diphenyl ethers (PBDE) and cadmium. Pursuant to EU-regulation REACH that came into force on 1 June 2007, the products are solely non-chemical. Moreover, the products supplied will not release any substances under normal and reasonably foreseeable application circumstances.

# Disposing of the product

Definitions and regulations concerning hazardous materials are country-specific and change as knowledge of materials increases. The materials used in this product are typical for electric and electronic devices.

All parts used in this product are recyclable. When disposing of MySiteCare or its parts contact a local waste handler who is authorized and specialized in disposing of electronic waste. These handlers can sort the material by using dedicated sorting processes and dispose of the product in accordance with local requirements.

### Table 1: Product composition

Gateway	Parts	Material
Case	Case	Plastic
	Metallic plates, parts and screws	Steel
	Electronic modules	Various
Package	Box	Cardboard, Polyethylene foam
Attached material (optional)	Manuals	Paper

# Applicable directives, standards and compliance

The following directives, standard and compliances are applicable to MySiteCare:

- ESD: EN61000-4-2
- Radiated Electromagnetic Field: EN61000-4-3
- EFT Immunity: EN61000-4-4
- Surge immunity: EN61000-4-5
- Common Mode Conducted RF-Disturbances: EN61000-4-6
- Power frequency magnetic field: EN61000-4-8
- Conducted common mode disturbances in 0-150kHz: EN61000-4-16
- Immunity Test 1MHz Burst: EN61000-4-18
- Conducted and Radiated emission test: CISPR 11
- EU directive 2002/96/EC/175
- Low-voltage directive 2006/95/EC

# 3. MySiteCare overview

### Overview

MySiteCare is a smart service device that manages maintenance for the circuit-breakers in utility and industrial distribution systems. The MySiteCare diagnostic unit is able to monitor a circuit-breaker, estimate its remaining life and suggest maintenance activities.

MySiteCare monitors circuit-breaker real life based on actual use: trips, current interruption, etc. The final result of MySiteCare calculations are shown by the front LEDs: red, yellow, and green. The diagnostic information is immediately clear thanks to this traffic light system.

Each time the breaker operates, circuit-breaker life reduces through wear. Contact wear depends on the tripping current. The remaining life of the breaker is estimated from the circuitbreaker trip curve provided by the manufacturer.

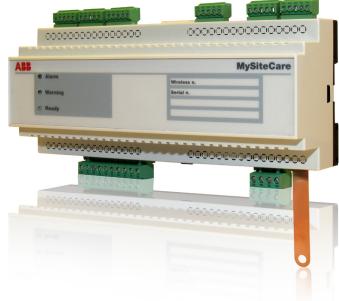
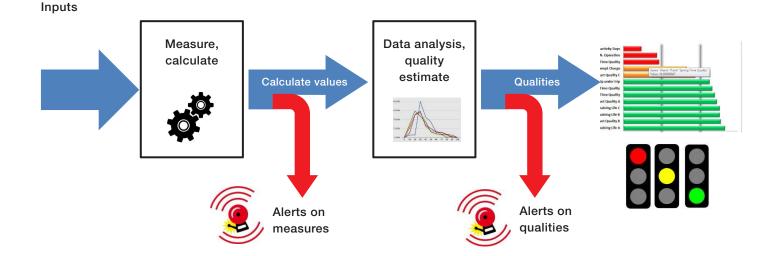


Figure 1: MySiteCare device

#### **Diagnostic analysis**

MySiteCare is able to measure current under tripping conditions, and the following binary inputs:

- Open command (open coil)
- Close command (close coil)
- Charged spring contact
- Circuit-breaker state contact
- Trip command from protection relay (optional)



#### Figure 2: General workflow of MySiteCare diagnostic algorithms

MySiteCare offers a full range of functions which are used to obtain optimized predictive diagnostic analysis of the circuit-breaker.

The main functions are the following:

- Opening time
- Closing time
- Position error
- Number of operations
- Number of fault operations

### • Inactivity timer

- Loading time of operating mechanism springs
- Failure to attempt of operating mechanism springs
- Circuit-breaker compartment air temperature
- Auxiliary voltage quality
- Power contact wear (lkt)

All these functions estimate quality variables which are then used to generate the overall MySiteCare state and the traffic light displayed by the LEDs.

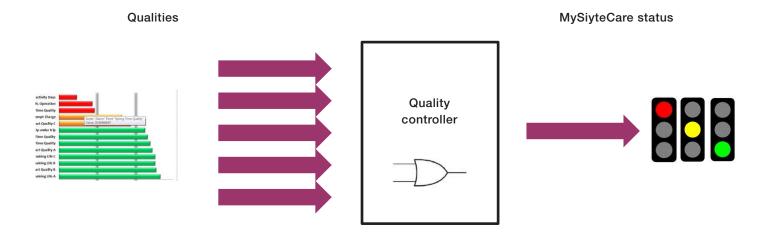
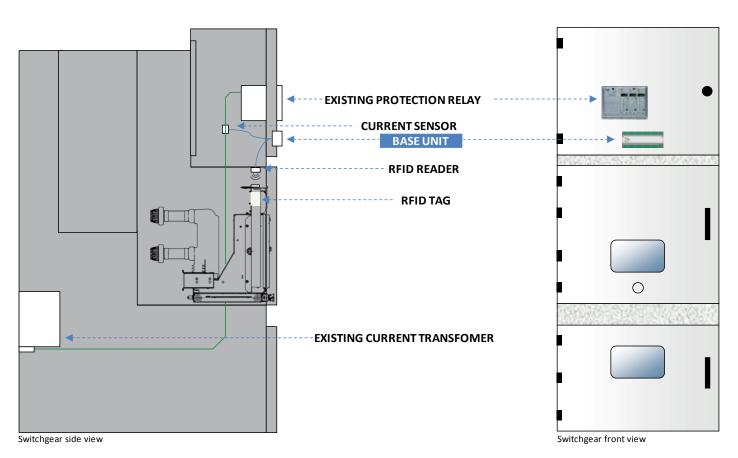


Figure 3: MySiteCare state generation

# **Typical Installation**

Installation of MySiteCare is very easy and does not interfere with protection relays or measurements. MySiteCare can be ordered with a special kit composed of DIN-rail, terminal blocks, and corresponding cables. The current sensor is just clamped around the cables leading from the preexisting current sensor without any changes to the wiring.

The binary inputs are connected in parallel to the preexisting coils and contacts.



\* Installation example. Other solutions are available.

Figure 4: Example of a typical installation in a switchgear (other solutions are available)

### Local LEDs

There are three LEDs on the front of MySiteCare: red, yellow and green.

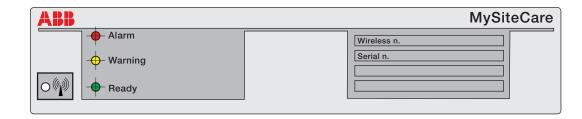
ABB	MySiteCare
Alarm Warning Ready	Wireless n.         Serial n.

#### Figure 5: Front LEDs

One of these LEDs blinks every second during normal operation. MySiteCare blinks the one that indicates the state of the monitored circuit-breaker.

#### Table 2: LED states in the run mode

Red LED	Yellow LED	Green LED	Description
One blink per second	Off	Off	There is an active alarm involving at least one quality variable
Off	One blink per second	Off	There is an active warning involving at least one quality variable (no alarms)
Off	Off	One blink per second	All the quality variables are OK (no alarms, no warnings)



#### Figure 6: Front LEDs, with wireless option

If MySiteCare has the wireless communication option, there is an additional LED on the front panel. The LED comes on when the wireless communication is active.

### **Monitoring Tool**

MySiteCare Monitoring software tool allows the customer and the service personnel to monitor the state of the breaker. The PC must be connected to the device via the USB port. Once connected, the main page shows the quality indicators and main life estimation parameters.

Every variable or parameter is colored in the usual way: red (alarm situation), yellow (warning zone), green (normal operation).

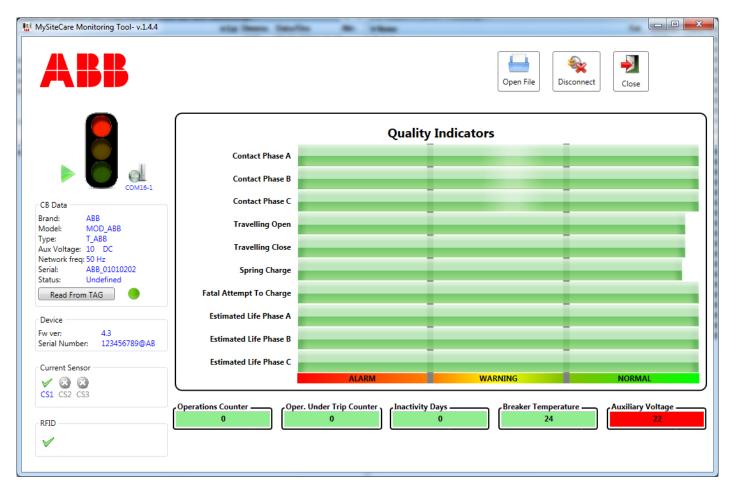


Figure 7: Monitoring Tool, main page

The identification parameters of the breaker can also be verified by the monitoring tool and must correspond to the monitored equipment.

Once connected, the Monitoring Tool also allows a configuration made previously with the configuration tool to be downloaded to MySiteCare.

#### **Configuration Tool**

The configuration software tool is intended for use by ABB service personnel only. The configuration tool allows MySiteCare to be configured, commissioned and serviced.



The Configuration tool is intended for use by ABB service personnel, who must take part in product training at the ABB service center to ensure its proper use.

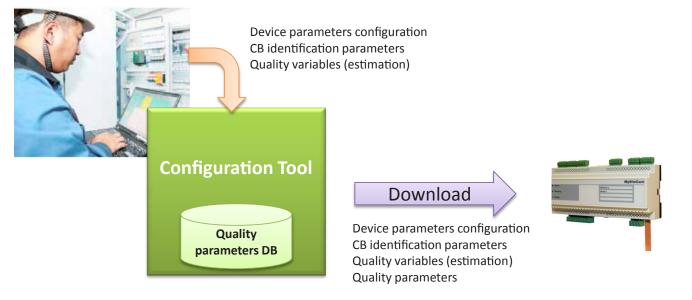
The most important functions are:

- Configuration of the monitored breaker parameters
- Configuration of the serial port, the RFID and the current sensors.

The Configuration Tool can be used "on-line" when directly connected to MySiteCare, or "off-line" via the PC. The second mode allows a configuration to be prepared in the office for later use on site.

The quality monitor function is the same as that of the Monitoring Tool.

### ABB Service personnel





Breaker configuration comprises the following items:

- Circuit-breaker identification parameters (e.g. type, model, s/n, etc.)
- Circuit-breaker diagnostic parameters (e.g. thresholds, permitted operating times, etc.). These parameters are usually pre-assigned by the configuration tool, as soon as the selected circuit-breaker type and model is recognized by the tool.
- Circuit-breaker quality variables (e.g. circuit-breaker estimated life, contact quality, spring quality, etc.

Quality parameters and quality variables can be then modified in the corresponding configuration pages.

The tool allows the configuration to be downloaded/uploaded from/into the device and a configuration to be loaded and saved from/into a file in the PC.

WySiteCare Configuration tool - v.1.4.4		1 1 1		x
ABB	Monitor Open file Save file	Modbus Calibration Read from dev	ice Write to device Disconnect Close	
	CB Identification CB Custom Parameters Custom Custom Serial Number [12 char]	CB Quality Real time test CB Log		
CB Data Brand: ABB Model: MOD_ABB Type: T_ABB Aux Voltage: 10 DC Network freq: 50 Hz	Brand [4 char] Model [8 char]	ABB_ABB_ABB_ABB_ABBABAAAAAA		
Serial: ABB_01010202 Status: Undefined Read From TAG	Type [6 char] Auxiliary Voltage Auxiliary Contact	T_ABB 10 Type Low Level  Spring	DC   High Level	
Fw ver: 4.3 Serial Number: 123456789@AB	(open CB) Current Transformer Primar			
	Network frequency Notes	50 Hz		

Figure 9: Configuration Tool, breaker parameters page

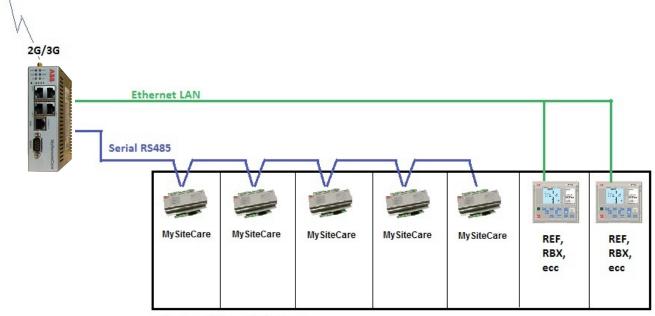
# Communication channel for monitoring

MySiteCare supports the Modbus® RTU protocol. Operational information is available through this protocol. The protocol is available via the serial channel (RS485). MySiteCare works as a slave node through this channel. This means that one Modbus® master node can query any available register via the serial channel.



Although Modbus® is a standard protocol, it is advisable to use the MyRemoteCare gateway as a self-configurable master specifically designed to integrate with MySiteCare.

MyRemoteCare Gateway acts as a Modbus® Master RTU and/or Modbus® TCP Client in order to read information from the diagnostic equipment.



Medium Voltage Switchgear

Figure 10: Example of communication architecture

# 4. Monitoring functions

The Monitoring Tool monitors the equipment connected to MySiteCare. The monitoring functions described here are available both via the Monitoring Tool and in the Configuration Tool.

### Connecting to the device

MySiteCare has a USB port on the bottom part. This port can be used to configure and monitor the device using a PC. MySiteCare USB is compatible with 2.0 and the plug is Standard A.

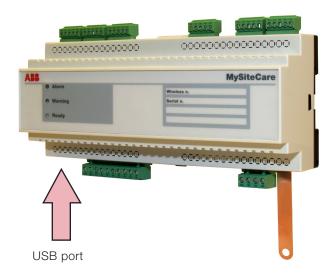


Figure 11: MySiteCare USB port

Power the device, then connect the PC USB port to the USB port of the device. Once the USB is connected and the device is powered, the Virtual COM port is automatically created in the Windows® system settings. Every program running on that PC can use this COM port as a standard one.



If the device is connected to the USB of the PC without any power supply, it still turns on, since the USB can supply enough power to the device. However, without any external power supply only the main microcontroller is turned on, but not the sensors, RFID, and binary inputs.



Figure 12: USB cable



The USB port of the PC is used with a Virtual COM driver, so it functions in Windows as a standard COM port. The number of the COM port depends on the Windows configuration and existing COM ports into the PC.

In order to check the COM port of the USB driver in the Windows system, go to Start, Computer, Manage, Device Manager, and check in Ports the COM port used by the USB driver.



Figure 13: Device manager COM port



The virtual COM port only appears in the Windows system when the PC is connected to MySiteCare and the device is turned on.

When the Monitoring tool is launched, the first window asks for the COM port to be used. Select the right port and the address. Regarding this latter, AUTO can always be used with the USB port, since the Monitoring Tool can use a special addressing mode, independent of the actual address of the device. Press Connect button to open the serial link to the device.

The close button at the top right of the window terminates the application.

If the USB cable is inserted after launching the tool, the list of COM ports of the system must be read again by pressing the "Refresh" button. Once the right port has been selected from the list, press the "Connect" button to continue.



Do not disconnect the USB cable, since the tool is connected. Close the tool or disconnect before disconnecting the cable.

19 N	NySiteCare Monitoring Tool- v.1.4.4	sta	1 mm	aution (
	ABB			
	ort: USB Serial Port (COM16) - ddress: AUTO -			
	Connect 🐼			

Figure 14: MySiteCare Monitoring Tool, connection

### Monitoring tool: main page

The monitoring main page is displayed once the connection is established. It comprises three main areas:

- The toolbar: displays the function buttons
- The monitoring area: displays the qualities and main monitored values of the circuit-breaker
- The device state area: displays the state of the device and main information

### Monitoring tool: Toolbar area

There are three buttons on the toolbar in the monitoring page (once the device is connected):

- Disconnect button: closes the serial connection to the device and goes back to the initial page
- Close button: closes the application
- Open file: used to download a configuration file stored in the PC.

MySite Monitoring Tool				
ABB		TOOLE	BAR AREA	Disconnect Close
		Qualit	y Indicators	
	Contact Phase A			
0 COM8	Contact Phase B			
	Contact Phase C			
	Travelling Open			
Type: 12.12.36 Aux Voltage: 110VAC	Travelling Close			
DEVICE	Spring Charge			
STATUS	Fatal Attempt To Charge	MONITO	DRING AREA	
AREA	Estimated Life Phase A			
Serial Number: 10002932	Estimated Life Phase B			
	Estimated Life Phase C			
		ALARM	WARNING	NORMAL
	Operations Counter	Oper. Under Trip Counter	y Days Breaker Temperature	Auxiliary Voltage

Figure 15: Main page of monitoring tool

		TOOLBAR	Open File	Disconnect	Close
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Figure 16: Toolbar

#### Monitoring tool: device state area

The state area is underneath the ABB logo. It comprises the following parts:

- Traffic light
- Circuit-breaker data
- MySiteCare Device information
- Current sensor states
- RFID state

► 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
CB Data
Brand: ABB Model: VD4
Type: P
Aux Voltage: 60 DC Network freq: 50 Hz
Serial: 10000000101
Status: Data ok
Read From TAG Device Fw ver: 4.0 Serial Number: ABB123456790
Current Sensor
RFID
✓ -

#### Figure 17: State of the device

The traffic light displays the state of the monitored equipment. Whenever a quality indicator or absolute value turns red, the traffic light turns red. Otherwise,, whenever a quality indicator or absolute value turns yellow (and none is red), the traffic light turns yellow. Otherwise, if everything is green, the traffic light will also be green. The state of the MySiteCare unit can be checked on the left of the traffic light symbol: running, waiting configuration or error. the state of the COM port connection and the address are displayed on the right of the traffic light symbol.



Figure 18: Monitoring equipment, traffic light

If configured, the circuit-breaker data contains the identification information of the equipment: brand, model, type, serial number and auxiliary voltage. This information allows the circuit-breaker to be recognized. If installed, the data are also stored in the RFID label, so as to track circuit-breaker life.

Device information includes the identification data of the MySiteCare unit: serial number and firmware version.

• Even if the serial connection is one-to-one, it is advisable to check that the serial number on the label of the device is the same as the one saved in the internal memory and shown on the tool. Contact the ABB service team if the numbers fail to match.

The areas for the current sensors (maximum 3) and RFID (maximum 1) display the actual state of the sensors connected to the MySiteCare unit. Depending on the configuration, there can be three sensor states:

- Configured and running ( 2 )
- Configured but not working properly or not found or not connected ( ( )
- Not configured (blank or  ${}^{igsilon}$  )

# Please contact the ABB service team for further checks and analysis if an error is signalled.

RFID presence (maximum 1) is monitored by the RFID state icon if configured. The current sensor icons are:

- Configured and running ( 🗹 )
- Configured but not working properly or not found or not connected ( )
- Not configured (blank or  $^{igsidemodesized}$  )

#### Monitoring tool: circuit-breaker replacement

Once MySiteCare is configured, it monitors the breakers and saves any changes in its flash memory and RFID tag.

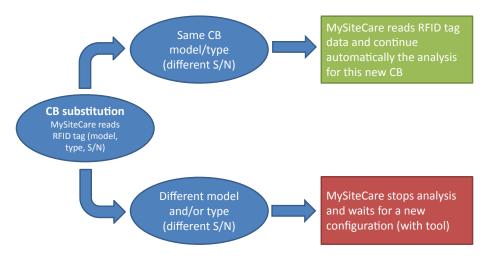
A monitored breaker light have to be replaced with a spare or be moved into another panel. MySiteCare recognizes this situation by means of the RFID: the new breaker has its own RFID tag, which contains identification and quality data.

As shown in Figure 19, there can be 2 different situations:

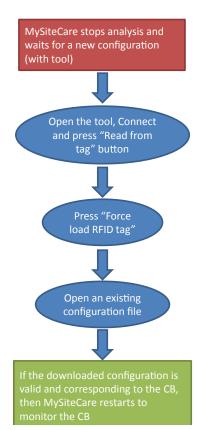
- The brand, model, type of the new CB are the same as the previous one: in this case MySiteCare recognizes the diagnostic parameters of this breaker and can continue the analysis, starting from the new RFID tag data
- The brand or model or type of the new CB do not correspond to the previous one: in this case MySiteCare is unable to continue with the analysis and stops, waiting for a new configuration. The operator must connect to the device with the PC and download a new configuration.

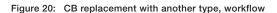
The MySiteCare unit reads the RFID tag every hour. To anticipate this operation, it can be forced with the monitoring tool. Press the "Read from tag" button in the CB data frame. After few seconds (the tag is quite slow) the CB information is updated.

If the circuit-breaker has been changed and the data does not correspond to the monitored equipment (or brand or model or type are changed), press the "Read from tag" button and the monitoring tool will detect and show the mismatch with a message (see Figure 20).









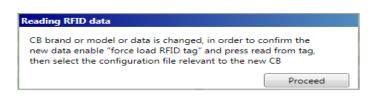


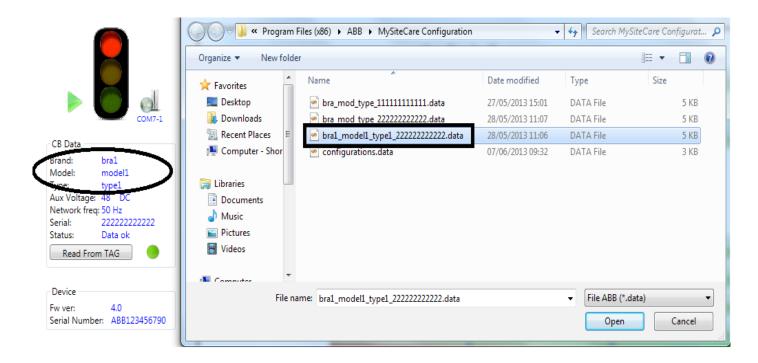
Figure 21: Monitoring tool: RFID TAG breaker mismatch identification

Click on "Proceed" and a new button will appear in the CB data frame: "Force load RFID tag". The MySiteCare unit then reads the values stored in RFID tag (see Figure 22) and store them in the flash memory. The user must then download a new configuration corresponding to the new breaker.

CB Data	Contact Phase C		
Brand: ABB Model: VD1365 Type: AAA Aux Voltage: 110 DC	Tr Reading from RFID tag		
Network freq: 50 Hz Serial: 123456789012 Status: Undefined	Fatal Atten <del>ipe ro charge</del>	Cancel	
Read From TAG	Ectimated Life Phase A		

#### Figure 22: New CB data reading

The tool only accepts a valid configuration which corresponds to the new RFID tag data.



#### Figure 23: Monitoring tool: downloading an existing configuration file

If the selected configuration is not compatible with the CB brand, model or type saved in the RFID tag, file downloading is inhibited and a message appears.

Ok

Figure 24: Monitoring tool: message when the configuration file does not match the CB



To update the new configuration correctly, it is mandatory to follow the complete procedure, starting from "force reading from TAG" until the correct configuration file has been downloaded.

### Monitoring the circuit-breaker

The monitoring area consists of two parts:

- Bar graph with the main estimated quality variables
- Measured values



 0
 Oper. Under Trip Counter
 0
 Inactivity Days
 Breaker Temperature
 Auxiliary Voltage

 0
 0
 29
 62

Figure 25: Monitoring area

All these values can be in the following areas:

- Normal (green) area: correct operation. No maintenance required
- Warning (yellow) area: the diagnostic unit has found a bad event, which could mean a higher probability of a fault in the equipment
- Alarm (red) area: the diagnostic unit has logged a really bad event, which means that the equipment must be checked and might require maintenance

The quality indicators are shown by bar graphs, which decrease during the life of the equipment, starting from green (full bar) to alarm zone (empty bar). The measured values could be in the red, yellow or green areas depending on their actual state.

#### Downloading of a valid configuration

The monitoring tool is able to download a valid configuration generated by the ABB service personnel into the MySiteCare unit.

Once downloading has been performed, the device verifies the data and automatically sets to the run mode with the new configuration. Contact the ABB service team for further information if errors occur during this operation.

|--|

Only download a new configuration into MySiteCare unit if it matches the equipment (circuit-breaker) to be monitored. For instance, if the circuit-breaker must be replaced, download the pre-generated configuration (by ABB service team) which corresponds to that new equipment.

#### Maintenance

If the yellow or red LEDs on the MySiteCare unit come on, check the Monitoring tool to locate the fault.



#### Figure 26: MySiteCare LEDs

There are three different events that can change the state of the traffic light:

- One or more of the quality indicators go into the warning or alarm area
- One or more of the measured values go into the warning or alarm area
- One or more of the sensors connected to MySiteCare units are not found or are not working properly

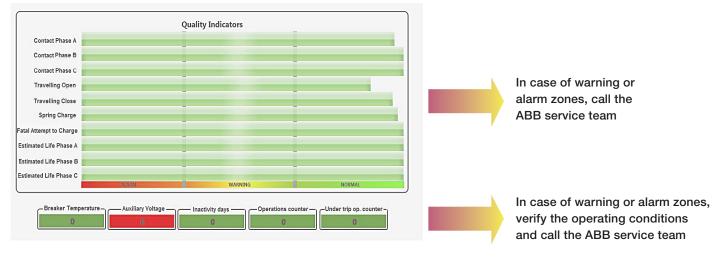


Figure 27: Quality warning or alarm maintenance

Contact the ABB service personnel for further information if the quality indicators move to the warning or alarm areas. If the measured values are involved, check the actions in Table 3.

Table 3: Monitored values,	maintenance actions
----------------------------	---------------------

Warning or alarm	Action		
Temperature	Check the temperature of the breaker compartment. Make sure that the operating conditions are correct.		
	Contact the ABB service team for further information and checks if the measured temperature is correct, and the alarm or warning remains active.		
Auxiliary voltage	Check the auxiliary voltage of the device, which should be the same as the one used for the circuit- breaker's auxiliary equipment. It is usually between 85% to 110% of the rated auxiliary voltage. Check the circuit-breaker data sheet.		
	Contact the ABB service team for further information and checks if the measured auxiliary voltage is correct and the alarm or warning remains active.		
Inactivity days	The unit checks the number of days since the last operation (open or close). It is now time to perform circuit-breaker maintenance in accordance with the circuit-breaker manufacturer's recommendations.		
	Contact the ABB service team for further information and checks if the alarm or warning remains active, even after maintenance.		
Operation counter	The number of operations exceeds the value established by the breaker manufacturer.		
	The breaker requires maintenance, as indicated in the manufacturer's recommendations.		
Operations under trip counter	The number of operations under trip exceeds the value established by the breaker manufacturer.		
	The breaker requires maintenance, as indicated in the manufacturer's recommendations.		



The MySiteCare unit must be informed whenever the equipment is serviced. Only ABB service personnel are allowed to update MySiteCare information with the proper tool.

### MySiteCare LEDs

The behavior of the red, yellow and green MySiteCare LEDs is described below. When MySiteCare is configured and working

properly, the LEDs show the circuit-breaker's condition. Otherwise, they show possible faulty states, as shown in Table 4.

### Table 4: LEDs behavior

LEDs	status		MySiteCare unit	RFID transmitter	Circuit-breaker
Ο	0	0	Not powered-up or damaged	-	-
0	0	$\bigcirc$	Properly configured and running properly.	Ok if configured	Normal condition.
0	$\Theta$	0	Properly configured and running properly.	Ok if configured	Warning condition
$\Theta$	0	0	Properly configured and running properly.	Ok if configured	Alarm condition
0	0		Properly configured with RFID.	Not connected, or not working.	-
0		0	Completely or partially configured.	Not connected, or not working	-
0			Completely or partially configured.	Connected but with invalid data or not yet configured.	-
	0	0	Not configured or partially configured.	Connected and containing valid data	-
	0		Configured	Connected and containing valid data	
0		0	Configured	Connected and containing valid data, but RFID TAG information does not correspond to MySiteCare breaker information	The breaker may have been replaced with another one
			Configured	Data upload on RFID	-
Legen	ıd:		LED off	ng slowly (1 sec)	c)

# 5. Troubleshooting

# **USB** Communication error

Check the USB cable and the serial USB COM port into the Windows® System. The COM driver may have been corrupted. Reinstall the tool.

USB cable 3.0 may not be compatible with the MySiteCare USB port.

Contact the ABB service team if the fault persists.

### Equipment not found or fails to correspond

If the circuit-breaker data is unavailable, or fails to match the device configuration (stored into its flash memory) the diagnostic unit waits for configuration.

# Current Sensor not found

Error is indicated if at least one of the current sensor is configured but not found.

Each sensor has 3 LEDs, which represent the measured phase: L1, L2, or L3. Error appears if more sensors are measuring the same phase. In this case contact ABB service personnel.

If the sensor LEDs are all off, check the cable connecting the device and the sensor. Contact the ABB service personnel if the fault persists.

If the sensor LEDs are all blinking, contact the ABB service personnel, since the sensor may not be properly configured or not working properly.

# **RFID** not found

If the monitoring tool indicates that the RFID is not working or not found, check the connection cable between MySiteCare unit and the RFID. Contact ABB service personnel if the fault persists.

# 6. System requirements

#### Hardware requirements

Hardware	Minimum	Recommended	
CPU	1GHz	>1GHz	
RAM	1GB	>1GB	
Free hard disk space	100MB	>100MB	
Monitor	1024 x 768	1280 x 1024	
USB port	2.0 or compatible	2.0 or compatible	

#### Supported operating systems

Operating System	Version
Microsoft Windows XP Professional 32-bit	SP3 or later release
Microsoft Windows Vista Professional 32-bit	SP2 or later release
Microsoft Windows 7 Professional 32-bit	
Microsoft Windows 7 Professional 64-bit	

#### Required software and libraries

Required software	Version
Microsoft .NET framework	4.0 or later
FTDI VCP (Virtual COM) driver for USB. It is also provided in the MySiteCare tools setup program.	2.08.24

#### .NET Framework technology overview

The .NET Framework (pronounced dot net) is a software framework developed by Microsoft that runs primarily on Microsoft Windows. It includes a large library and provides language interoperability (each language can use code written in other languages) across several programming languages. Programs written for the .NET Framework execute in a software environment (as opposed to a hardware environment), known as the Common Language Runtime (CLR), an application virtual machine that provides important services such as security, memory management, and exception handling. The class library and the CLR together constitute the .NET Framework.

The .NET Framework's Base Class Library provides user interface, data access, database connectivity, cryptography, web application development, numeric algorithms, and network communications. Programmers produce software by combining their own source code with the .NET Framework and other libraries. The .NET Framework is intended to be used by most new applications created for the Windows platform. Microsoft also produces a popular integrated development environment largely for .NET software called Visual Studio.

The .NET framework 4.0 has been released on April 2010 and it is the actual recommendation from Microsoft.

#### USB virtual COM port driver

FTDI (Future Technology Devices International Limited) Virtual COM port (VCP) drivers cause the USB device to appear as an additional COM port available to the PC. Application software can access the USB device in the same way as it would access a standard COM port.

The latest tested driver version for Windows 32/64 bit is 2.08.24 (released on April 2012).

# 7. Software installation

# **Monitoring Tool**

Launch the setup program, and follow the instructions. During the setup, you may be asked to install the Microsoft .Net Framework 4 (an Internet connection is required in order to automatically download it) and the virtual COM driver for USB. You must accept the installation of all the required libraries and software during the MySiteCare setup.

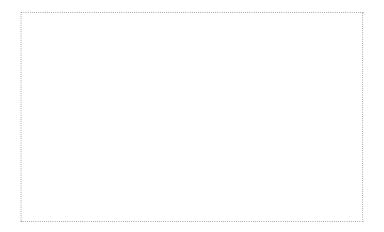
In order to install the tool, you need to be administrator of the PC or able to install the driver and the software files into the proper folders (otherwise launch it as "run as administrator").

### How to remove the installed Tool

Use the standard Windows® method to uninstall programs from the control panel.

# 8. Glossary

ARP	)	Address Resolution Protocol	LED	Light-emitting diode
CAT	5	A twisted pair cable type designed for high	LHMI	Local human-machine interface
		signal integrity	Modbus	A serial communication protocol developed
CPL	J	Central processing unit		by the Modicon company in 1979. Originally
CT		Current transformer		used for communication in PLCs and RTU
DHC	P	Dynamic Host Configuration Protocol		devices.
EMC	2	Electromagnetic compatibility	Modbus RTU	Modbus link mode. Character length 11 bits.
Ethe	ernet	A standard for connecting a family of frame-	Modbus TCP/IP	Modbus RTU protocol which uses TCP/IP
		based computer networking technologies		and Ethernet to carry data between devices
		into a LAN	PA	Polyamide
Firm	iware	System software or hardware that has been	PBT	Polybutylene terephthalate
		written and stored in a device's memory that	PC	Personal computer; Polycarbonate
		controls the device	PCM600	Protection and Control IED Manager
ΗMI		Human-machine interface	PIN	Personal Identification Number
ΗW		Hardware	RJ-45	Galvanic connector type
IEC		International Electrotechnical Commission	RoHS	Restriction to the use of certain hazardous
IEC	61850	International standard for substation		substances in electrical and electronic
		communication and modeling		equipment
IED		Intelligent electronic device	RS485	Serial link according to EIA standard RS485
IP		Internet Protocol	STP	Shielded twisted-pair
IP a	ddress	A set of numbers between 0 and 255,	SW	Software
		separated by periods. Each server	TCP/IP	Transmission Control Protocol/Internet
		connected to the Internet is assigned a		Protocol
		unique IP address that specifies the location	VT	Voltage transformer
		for the IP protocol.	WAN	Wide Area network
LCD	)	Liquid crystal display	WHMI	Web human-machine interface
LCP	)	Liquid crystal polymer		



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