

## Product Guide





## Features

- Local and remote workplace
- Automatic dial-up of substations
- Automatic or manual collection of disturbance recorder data
- Versatile integration of disturbance recorder data evaluation tools
- Monitoring of relay specific event files, registered values and measured values
- General parameter setting support
- Easy switching between verified setting groups or setting banks
- Flexible tree structure navigation
- Authorization handling
- Supports time synchronization of connected IED's
- Integrated system self supervision
- Excellent commissioning tool
- Easily upgraded to support new functions and products
- All tool functions and documentation provided on one CD-ROM

## Application

The SMS 510 substation monitoring system is an overall substation monitoring system that gives you essential information about your electrical transmission and distribution process. This information comprises all measured, recorded and calculated data such as indications, settings and diagnostic information available in the protection and control terminals from ABB. Setting and resetting facilities for the protection and control terminal are also provided by the product.

The SMS 510 is a product for substation monitoring that allows the end users to configure the entire system themselves. SMS 510 is the ideal tool for creating tailor-made substation monitoring solutions that fulfil your specific requirements. From the very beginning this substation monitoring system was designed to take advantage of the Windows technology, thus providing an easy-to-use tool with well-structured navigation for building substation monitoring systems.

The SMS 510 substation monitoring tool is the successor of the proven SMS 010 substation monitoring packages. In order to safeguard your earlier investment, the SMS 510 includes advanced import and export facilities ensuring continuity with your existing SMS 010 applications.

The SMS 510 can be used either locally at the station or remotely via a modem. Utilizing a public telephone network or a standard TCP/IP network for remote use, the SMS 510 system offers you the most cost-efficient way to implement substation monitoring.

Following application alternatives are available:

- Local PC connection to the IED front using appropriate connection cables

- Local PC connection to the SPA or LON station bus allowing access to all IED's at a station
- Remote PC connected to a local substation computer or gateway
- SYS 500 or SYS 600 substation automation computer
- SMS 510 local substation monitoring computer
- COM 500 gateway computer
- COM 610 gateway

It can be easily expanded into a larger SMS system, or up-graded stepwise into a full-fledged Substation Automation System. The SMS 510 is also fully compatible with the CAP 501 and CAP 505 stand-alone tool packages and the LIB 500 application libraries.

Following protection relays and terminals with SPA or LON communication are supported in SMS 510 v.1.3.0:

- The entire SPACOM range including SACO annunciators
- The multipurpose relay series REJ 5\_\_ and REU 5\_\_
- The REF 541/543/545 integrated protection and control terminals
- The REM 543/545 integrated machine protection and control terminals
- The RET 541/543/545 integrated transformer protection and control terminals
- The REX 521 integrated protection and control terminals
- The REC 523/501 control terminals

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- The REF/REM/REU 610 protection relays
- The RE\_ 5\_\_ series integrated protection and control terminals for transmission applications
- The RE\_ 216/316 series integrated protection and control terminals

Further information about the SMS 510 product and its use in single relay applications and in local and remote system solutions can be found in the full product documentation on the product CD-ROM.

**Design**

The SMS 510 product consists of a base system with a navigator on which support tools for the protection and control terminals are run.

**Software categorization**

**Base system**

- Kernel software, additional base tools and services, providing a framework for the object types and tools.

**REF 541/543/545, REM 543/545, RET 541/543/545, REJ 52\_\_, REU 523, REX 521, REF 610, REM 610, REU 610 and REC 523 support**

- RED 500 object types and RED Relay Setting Tool for parameterization.
- DR-Collector Tool for uploading disturbance recording files.

**SPACOM support**

- SPACOM object type and SPACOM Relay Setting Tool for parameterization of SPACOM series relays and SACO annunciators.
- DR-Collector Tool for uploading disturbance recording files.
- SPTO Configuration Tool for configuring the SPTO modules.

**RE\_ 5\_\_**

- RE\_ 5\_\_ object type and interface for the Parameter Setting Tool.
- HV/Collect Tool for uploading disturbance recording files.

**REB 500 and RE.x16**

- REB 500 and RE. 216/316 object types and CAP216/316, REBWIN tools for parameterization and uploading of disturbance files.

**Document files**

The SMS 510 Program CD contains SMS 510 documentation in pdf format and an installer for Acrobat® Reader (version 6.02) from Adobe Corporation. The Acrobat Reader is needed to view the documentation.

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**Technical data**

The SMS 510 product v.1.3.0 sets the following hardware and software requirements on the PC. Notice also the kernel-related dependencies explained in the Section “System-wide product interdependencies” of SMS 510 Installation and Commissioning Guide 1MRS751265-MEN.

**Table 1: Software requirements**

Item	Required
Operating system	Microsoft® Windows NT® 4.0 Workstation, Microsoft Windows 2000® or Windows XP® Professional. The latest Service Packs installed.
Network	Operating system network software installed with at least one network protocol (e.g. TCP/IP)
Network protocol	Transport Control Protocol/Internet Protocol (TCP/IP)
Remote Access Service (RAS)	Installation of RAS to enable remote connections from SMS 510 to SMS 510, SYS 500 and COM 500.
Microsoft Internet Explorer	Version 4 or higher to be capable of viewing the HTML help shipped with the PST tool.

**Table 2: Hardware requirements**

Item	Minimum	Recommended
Processor	233 MHz or higher Pentium®*) compatible CPU	1 GHz or higher Pentium compatible CPU
Memory	128 MB	256 MB
Display	SVGA, 800x600, 256 colours	SVGA, 1024x768, 256 colours
File system	Windows NT or Windows 200 file system on the installation drive	
Hard disk space	500 MB	>1 GB
CD-ROM drive	Any device supported by the operating system. Required for installation	
Mouse	Any device supported by the operating system	
PCI slots	One slot for each PCLTA-20 card	
PCMCIA slots	One slot for each PCC-10 card	
Network adapter card	Any device supported by the operating system	

\*) Pentium is a registered trademark of Intel Corporation.

**Table 3: Additional requirements**

Item	Description
User account	It has to be logged on to the operating system with administrator rights in order to install the software successfully. Otherwise the installation is denied.

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Ordering

- It is possible to order the main package containing the SMS 510 main release. The ordering number for the main package is 1MRS151015.
- An upgrade package to SMS 510 v.1.3.0 is also available for users who already have a previous licensed version of SMS 510 v.1.2.0 installed on their PC. The ordering number for the upgrade package is 1MRS151034. The upgrade package can also be downloaded via the Internet: [www.abb.com/substationautomation](http://www.abb.com/substationautomation).

The SMS 510 v.1.3.0 requires a valid v.1.3.0 license. The upgrade package requires a valid v.1.2.0 license. Other SMS 510 v.1.3.0 requirements are found in the SMS 510 Installation and Commissioning Manual on the CD.

The communication cables listed in the next table are not included in the SMS 510 delivery. Required communication cables can be acquired by placing a separate order, see the table below:

**Table 4: Communication hardware**

REF 541, 543, 545 REM 543, 545 RET 541, 543, 545 REX 521 REJ 51_ / 52_ REU 513, 523	Opto	1MKC950001-2
REC 523	RS 232	1MRS120520
REF 610, REM 610, REU 610	Opto.	1MRS050698
SPTO front connector SPCR front connector	RS 232 - RS 232	SPA-ZP 17A3
SPACOM 100/300 series	RS 232 - TTL connector	SPA-ZP 5A3
SPAC 300/500/600 rear	RS 232 - RS 485	SPA-ZP 6A2
SACO 16A3, 16D1, 16D3 and 64D4	Connection cable for SPA-ZP 6A2 to SACO screw terminal	SPA-ZP 21A and SPA-ZP 6A2





**ABB Oy**  
Distribution Automation  
P.O. Box 699  
FI-65101 Vaasa, FINLAND  
Tel +358 10 22 11  
Fax +358 10 224 1094  
[www.abb.com/substationautomation](http://www.abb.com/substationautomation)