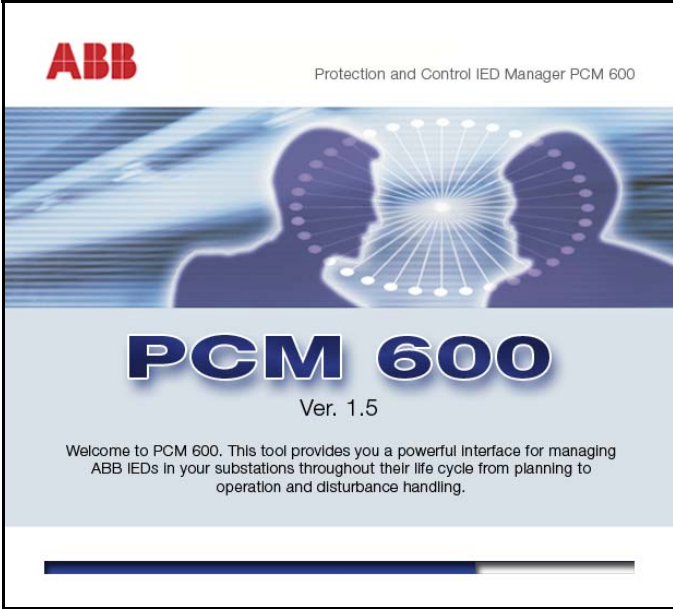


Protection and Control IED Manager

PCM 600

Product Guide



Features

- Flexible tool architecture
- Easy to adapt IEDs to power system requirements
- Supports top-down and bottom-up engineering with SCL import/export
- Effective engineering with improved IED handling: Copy/Paste/Import/Export
- Extensive on-line help and screen tips
- Context sensitive menus and toolbars
- Password and user management in tool and IED
- Project handling: Import-Export/Copy-Paste and Rename
- Support of ANSI units and symbols
- Scheduled polling of disturbance files
- Automatic disturbance reporting
- Advanced graphical application configuration tool based on IEC 61131-3
- Graphical on-line monitoring of internal binary signals
- Forcing of input and output signals
- On-line monitoring of LED indications
- Filtering of parameters for different users
- Full control of all parameter setting updates
- Documentation of configuration and settings

Application

Information management power

Protection and Control IED*) Manager PCM 600 is an easy-to-handle tool for configuration and communication engineering, parameter setting, and monitoring. It provides versatile functionalities required throughout the life cycle of protection and control IEDs in transmission and distribution applications. It features functionality for creating and editing single line diagram for the IED HMI, and supports the efficient configuration of I/O signals.

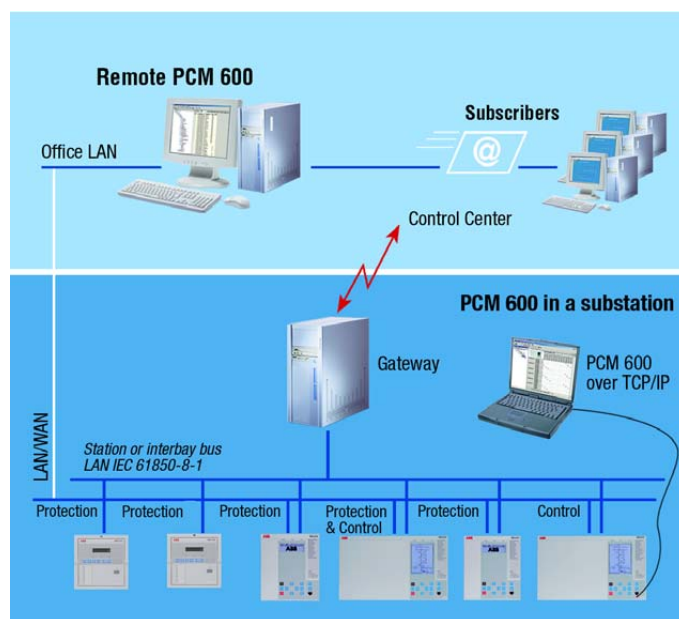
natively directly through the communication port at the front of the IED. As a result, the downloading and uploading of configuration and settings can be executed faster than ever – locally and remotely.

PCM 600 scans and retrieves disturbance information for automatic report file generation. Automatic reporting allows relay engineers to concentrate on disturbance analysis instead of manually collecting data. This way, there is more time for analysis of demanding fault cases.

Fast download and upload of data

Designed to communicate, PCM 600 interacts with IEDs over the fast and reliable TCP/IP via corporate LAN or WAN, or alter-

*) Intelligent Electronic Device



PCM 600 architecture_181206

Fig. 1 PCM 600 architecture

Engineering

PCM 600 is compliant with IEC 61850, which simplifies IED engineering and enables information exchange with other IEC 61850 compliant tools. PCM 600 facilitates a familiar Windows Explorer look and feel, and enables you to modify the attached template based on a default plant structure including all IEDs in a substation. This structure reflects the substation topology.

PCM 600 also utilizes ABB's unique connectivity package concept, which simplifies IED engineering and reduces the risk of errors. This package makes configuration and other IED data automatically available in the PCM 600. It further contains a comprehensive description of the IED, consisting of data signals, parameters, measurements, as well as the IED documentation.

With PCM 600 you can graphically adapt the configuration or create new configurations to meet your specific needs. Furthermore, this tool secures the downloading of formally correct configuration through extended syntax checking and guided error tracking. You can also monitor signal status online, which is extremely useful for troubleshooting.

Additionally, PCM 600 features a powerful IED import-export and copy-paste functionalities which allow you to efficiently reuse existing IEDs, bays or substations. All data associated to the IEDs, bays or substation, such as settings, graphical configuration or bay/substation topology, can be exported and used as IED template or copied to the new plant structure.

User management

PCM 600 offers advanced ways to control user rights in the tool and in the IED. User accounts in the PCM 600 can be linked according to Windows user accounts or be defined as separate PCM 600 user accounts.

PCM 600 offers also tool for IED user management, which allows user to activate and edit the user profiles, group memberships and group access rights for IED functions and operations.

Connection of signals

After the IEDs have been configured and parameterized, you can for instance configure the bay-to-bay communication for station-wide interlocking and send the complete IED description to a system engineering tool. In an IEC 61850 based system GOOSE (Generic Object Oriented System-Wide Events) messaging is used for time critical messages.

The graphical signal matrix tool (SMT) of PCM 600 allows you to efficiently connect CTs, VTs and binary input and output signals without changing the configuration. This is

especially helpful during commissioning in case the connection from the process termination to the IED terminal blocks needs to be changed. The SMT is also used for connecting the LEDs on the IED as well as for connection of the GOOSE signals between the IEDs.

Furthermore, PCM 600 supports effective commissioning and testing of physical connections by allowing user to activate both analog and binary signals from the signal monitoring tool.

Parameter setting

PCM 600 features advanced Filtering for handling parameter settings. A normal mode allows the relay engineer to quickly view and change the most important parameters, whereas an advanced mode presents all parameters. Parameter settings can be stored in the PCM 600 as primary quantities, which will simplify the setting calculations.

This tool provides you with full control over the updated parameters. You can upload the current settings from the IED to PCM 600

while the IED is in service. After changing the desired parameters the Filtering functionality of PCM 600 allows you to compare them easily with the uploaded settings. This way you can ensure that the intended settings have been modified and that the values are correct before the new IED settings are downloaded. This also reduces the time needed for commissioning and maintenance. PCM 600 permits the restoring of verified default settings to the IED anytime after the IED has been taken into operation.

Disturbance handling

Disturbance handling is vital through the entire life cycle of a substation. PCM 600 takes the first step towards a new era in disturbance handling. It processes data The signal monitoring function gives you online information about the measured quantities and status of binary input and output signals.

for understanding the cause of the disturbance, for fast corrective actions. The report layout and contents can be easily adapted to meet the needs of different subscribers. This feature significantly reduces the time required for the handling of disturbance reports and

allows the subscriber to spend more time on complicated disturbances demanding special attention.

The disturbance files are stored in IEDs in COMTRADE, the de-facto standard format. This allows you to view the disturbance record using ABB or any commercially avail-

able software tool you prefer. Disturbances stored in the IED can be uploaded using a scheduler. After the upload, PCM 600 automatically creates a disturbance report, which will be immediately sent to subscribers by e-mail. Such a notification shortens the time from disturbance detection to corrective actions.

Communication management Tool

A new communication management tool has been implemented in PCM 600 Ver. 1.5 SP1. It can be used to configure 670 IEDs featuring support for the DNP 3.0 Level 2 protocol. By means of the communication management tool the user can configure the IED to

interface with one or several DNP 3.0 Level 2 masters. The communication management tool allows the user to select the signals to be included in the DNP 3.0 Level 2 communication and to modify signal related attributes.

Context sensitive and interactive online help

All necessary instructions for using PCM 600 are integrated in the tool itself. The tool's context sensitive and interactive online help provides users with step-by-step instructions.

A powerful search function serves you quickly with solutions for any problem situation you may face. You can also print out any page from the online help. Like in any Win-

dows applications, you can access information related to a selected item by pressing function key F1 on your keyboard. As a PCM 600 user you will also get additional help from screen tips when using functions via toolbars. Additionally, you can access the IED documentation by a mouse-click directly from your PCM 600 tool.

Technical data

Main PCM 600 components

- Project navigator
- Configuration
- Parameter setting
- Signal matrix tool for easy I/O handling
- Graphical display editor for the IED HMI
- Disturbance handling
- Task scheduler
- Signal monitoring
- Event viewer
- User management and authority handling tool
- Communication management tool for DNP 3.0 signal engineering

Supported protection and control IEDs (Release 1.5)

- REB 670, REC 670, RED 670, REG 670, REL 670, RET 670

Supported operating systems

- Microsoft Windows 2000 SP4
- Microsoft XP Professional Edition, service pack 2 or later

Communication

- Fast and reliable TCP/IP communication
- Remote connection - via LAN/WAN (Ethernet) - via dial-up modem; direct (SPA communication within a substation)
- FTP file transfer via LAN/WAN (Ethernet)

Hardware requirements, minimum/ recommended

- Processor: Pentium 900 MHz/ Pentium 2GHz
- Physical RAM Memory: 512 MB/ 1GB RAM
- Free Hard disk space: 500 MB/ 1GB free hard disk space
- Monitor: 1024 x 768 resolution
- Communication: Ethernet port
- Serial Port (RS-232) or USB/RS-232 converter if SPA based communication is used
- Opto/electrical (RS-232) cable for front communication if SPA based communication is used

Software ordering information

PCM 600

- Create projects
- Set parameters
- Monitor the IEDs on-line
- Handle events and upload disturbance records

Ordering numbers:

- single licence Ver.1.5:
 - 1MRK003395-AB

PCM 600 Engineering

- PCM 600 functionality
- Graphical application configuration of IED 670 products
- Create and edit IED HMI

Ordering numbers:

- single licence Ver.1.5:
 - 1MRK003395-BB
- corporate licence Ver.1.5:
 - 1MRK003395-BL

PCM 600 Engineering Pro

- PCM 600 Engineering functionality
- IEC 61850 communication configuration, including GOOSE communication

Ordering numbers:

- single licence Ver.1.5:
 - 1MRK003395-CB
- 10 single licences Ver.1.5:
 - 1MRK003395-CL

References

Table 1: Additional information

Manual	Revision	ID-code
Installation sheet	D	1MRS755552



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