

COMM-3 PC-Program for Protection Devices

1 Application

For numerical protection devices, starting with series D...2, the PC operating program COMM-3 is available. It is for up-to-date Microsoft operating systems:

- Windows 98, 98 SE
- Windows ME
- Windows NT4 (min. SP4)
- Windows 2000
- Windows XP
- Windows Vista.

Although all numerical Sprecher Automation protection devices may be set completely autonomic without a PC a PC operating program eases the work. Also it results in expanded possibilities. Foremost there are graphically evaluation and saving for documentation and filing of all relevant settings, measurands, events and disturbance data.

COMM-3 simplifies and enlarges **management** of protection devices. Corresponding to the installation (station project) a hierarchic structure (tree) can be build. This allows a simple location of devices and their data. In scope of the management program is the generation of characteristic files of distance protection devices as RIO-files (Omicron electronics), useful for both numerical testing facilities and display in graphics program SDA 2.

A connection between the PC and the Protection device can be established by using a **modem**.

An integrated **conversion** permits taking over existing COMM-2+ projects in to COMM-3. Also COMM-2 - binary formatted setting files can be converted.

For setting (parameterization) readout of information **device programs** are

available. For each structure version of a protection device a program exists. Any device program, launch able from management program, allows beside the standard functions as saving and printing:

- Complete setting of devices (except for a few security exceptions),
- Archiving of settings,
- Comparison of settings sets,
- Access right administration for each single setting,
- Readout and archiving of events,
- Readout and archiving of disturbance data (if they exist),
- Generation of disturbance files in COMTRADE format (IEEE C37.111-1991 taken over in IEC 60255-24),
- Launching of graphics program SDA2 for display and evaluation of disturbance data (option),
- A time difference of the events time stamp between several devices, which are not synchronous, can be manually removed. This eases faults comparison of different devices events.
- It is possible to record measurands from the connected protection device in a file.

2 Structure

The operating program COMM-3 consists of several parts:

1. Management program
2. Device programs and
3. Accessory programs.

The management program serves to well-ordered filing of protection devices and their data. This filing can be done in a file manager structure according to the installation structure. From the

management program the desired device program can be launched.

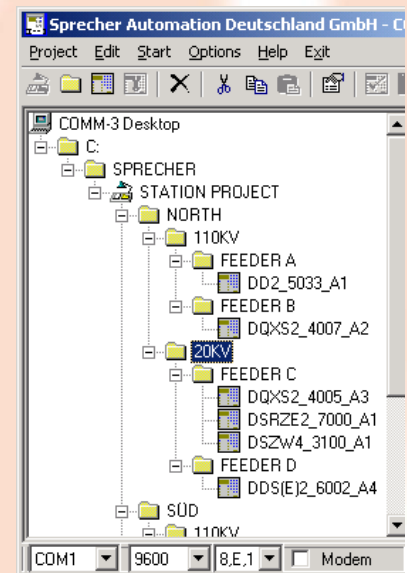


Fig. 1 Tree structure

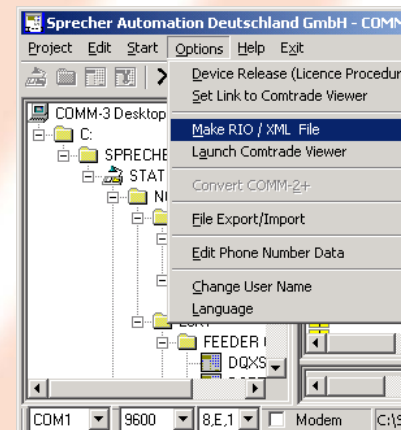


Fig. 2 Management program – Tools

For saved setting files of protection devices characteristics output files in XML- or RIO - format can be gener-



ated. This is useful for numerical testing equipment.

Disturbance data created as COMTRADE files can be analysed by running of the optional graphics program SDA 2 or any other COMTRADE graphics program.

In the "Properties" window additional information stored in files are shown, e.g. comments.

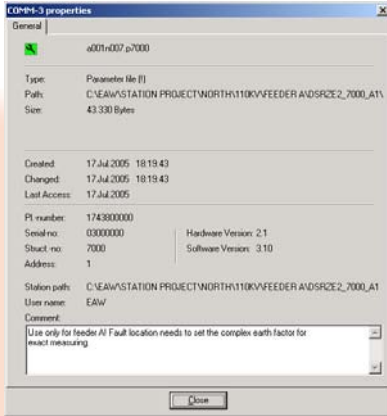


Fig. 3 File properties

For each device type a specific device program exists. Because also for a device type different software version by contents exists, each of the different software versions must have a specific device program. So for characterization of different device programs a "structure version" number is used. This number is on the devices rating plate.

E.g. at the moment for overcurrent-time protection type DSZ 2 structure versions 3001, 3003, ..., 3007 are in circulation. All of these structure versions have their own device program marked with the structure version number.

A device program is necessary for the co-operation with the protection device. With it one can carry out settings and readout and processing of information with the device.

Parameterization has also a tree structure see Fig. 4. This feature for setting of protection and supplementary functions gives a quick overview. Both inputs and outputs are configured as usual in a matrix (Fig. 7).

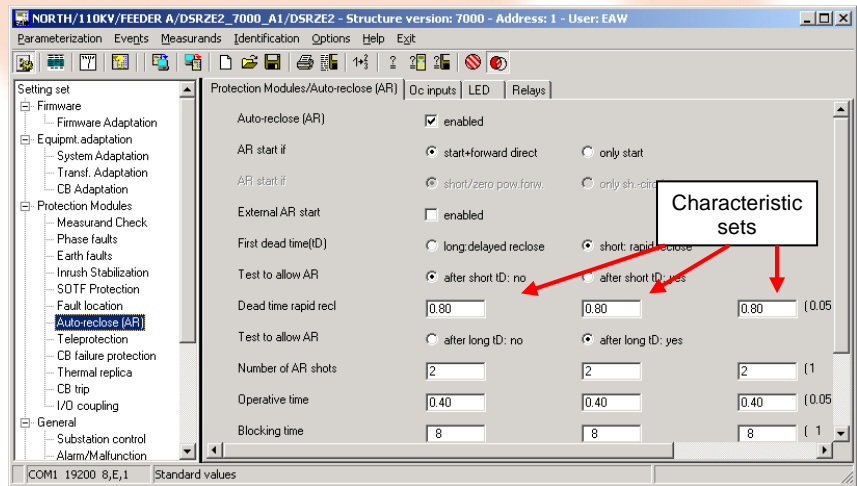


Fig. 4 Parameterization

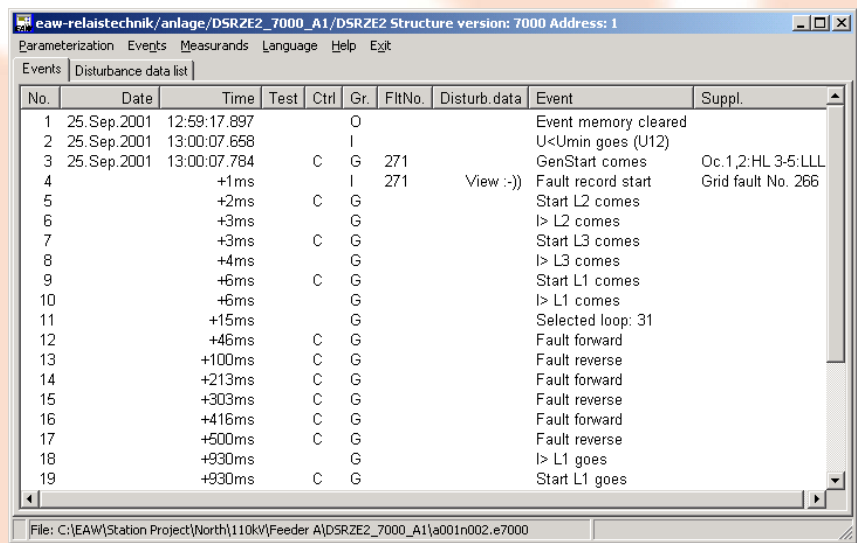


Fig. 5 Events display

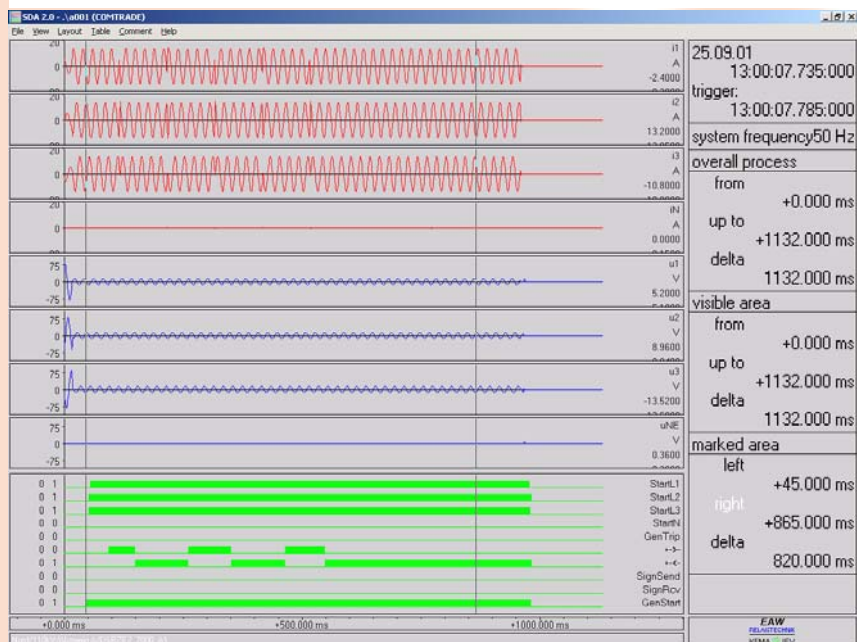


Fig. 6 Representation of disturbance data using SDA 2

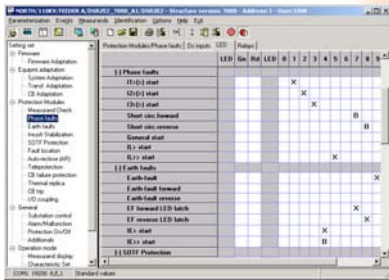


Fig. 7 Configuring of LED's

The rights to access settings of a protection device can be restricted for staff by an administrator.

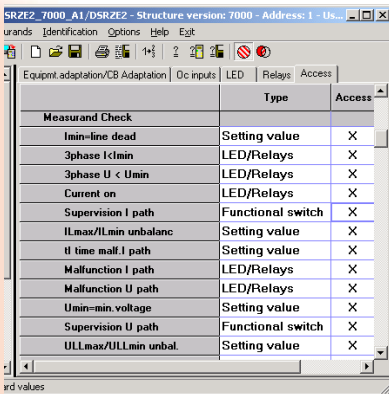


Fig. 8 Access rights administration

A context sensitive help is available for the setting process. On one hand a "tool tip" explains the required setting at the cursors point. On the other hand extended help can be reached using the link to the user's manual.

In the protection device existing events or saved on disk events can be load. They are displayed in list form. The order is the time stamp (see Fig. 5).

The time stamp of the loaded events may be changed by an adjustable amount. With it events of different protection devices having non-synchronous clocks can be compared easier.

When disturbance data exists to the shown event they are marked and can be load from the protection. Loading is possible as

- all disturbance data together or
- a single disturbance data record.

To display or evaluate the disturbance data the graphics program SDA 2 is necessary or an output file in COMTRADE format is generated. This file can be read by other graphics software, which supports the COMTRADE format.

Measurands can be read from the protection device and following saved. Among them the up-to-date status of measurands, the active characteristic set, date and time as well as the LED's status can be obtained. Moreover, it is possible to generate a file containing measurands and above mentioned status information. The time interval and quantity for recording (protocol depth) is adjustable.

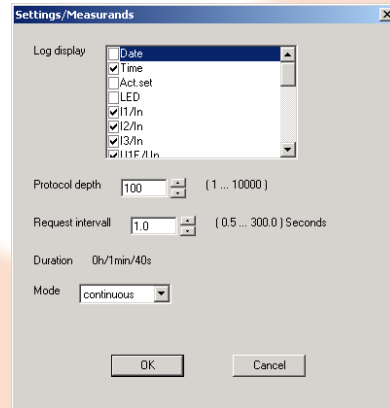


Fig. 9 Measurand recording

As an accessory the graphics software "SDA 2" is available. With its help the reading of COMTRADE – files based on IEEE-standard from 1991 is possible. Beside the graphical representation of disturbance data mathematically evaluations is achievable. Beyond it SDA 2 can display distance protection characteristics using .RIO-formatted files (Relay Interface by QMICRON).

With the development of COMM-3 was attached great importance to compatibility with old and future devices software versions. New devices can be easily installed.

The current COMM-3 program version can be downloaded from our web site.

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Any statements (specifications) as well as the termination of the production of a certain model are without prior notice subject to modifications.
The specifications of a model may vary from country to country.

Order data

• Management program

| | | |
|---------------------------------|--------------|---|
| Pl.-No.: | 1744 990 00- | |
| Variant: 10 th digit | | ↑ |
| Full-version | | 0 |
| Upgrade from COMM-2 to 3 | | 1 |
| Update of COMM-3 | | 2 |
| Demo version | | 9 |

On supplied CDROM the user manual exists as a PDF-file.

• Device programs

| | | |
|---|----------|----|
| Pl.-No.: | 1744 991 | -- |
| Type of device: 8 th and 9 th digit | | ↑↑ |
| all devices [structure versions] | | 00 |
| DM 2 [1004] | | 10 |
| DSRZ(W) 2 [2001] | | 20 |
| DSZ(W) 2 [3007] | | 30 |
| DSZW 4 [3105] | | 31 |
| DSZ 4 [3205] | | 32 |
| DQ2S 2, DQ3S 2 [4008] | | 40 |
| DD 2 [5033] | | 50 |
| DD.. 6 [5601] | | 56 |
| DDS(E) 2 [6002] | | 60 |
| DSRZE 2 [7000] | | 70 |
| DS... 6 [7604] | | 76 |
| Variant: 10 th digit | | |
| current structure version | | 0 |
| old structure version | | 1 |

When reordering a device program the structure version number of the device is necessary additionally (see label on device). Example for DSZ 2, old structure version 3001:

Pl.-No. 1744 991 301- 3001

Accessories

SDA 2 graphics software

Pl.-No.: 1744 992 000
On supplied CDROM the user manual exists as a PDF-file.

User manual COMM-3, SDA 2 printed version

| | | |
|---------------------------------|-------------|----|
| Pl.-No.: | 1744 993 0- | -- |
| Language: 9 th digit | | ↑↑ |
| German | | 0 |
| English | | 1 |
| Manual: 10 th digit | | |
| COMM-3 | | 0 |
| SDA 2 | | 1 |

PC-protector interconnecting cable

Pl. No.: 1743 900 010

Inquiries:

Sprecher Automation
Deutschland GmbH
Moellendorffstr. 47
10367 Berlin
Germany

Phone: +49 (30) 6449241-70

Fax: +49 (30) 6449241-99

E-mail: info@sprecher-automation.com

Internet: www.sprecher-automation.com