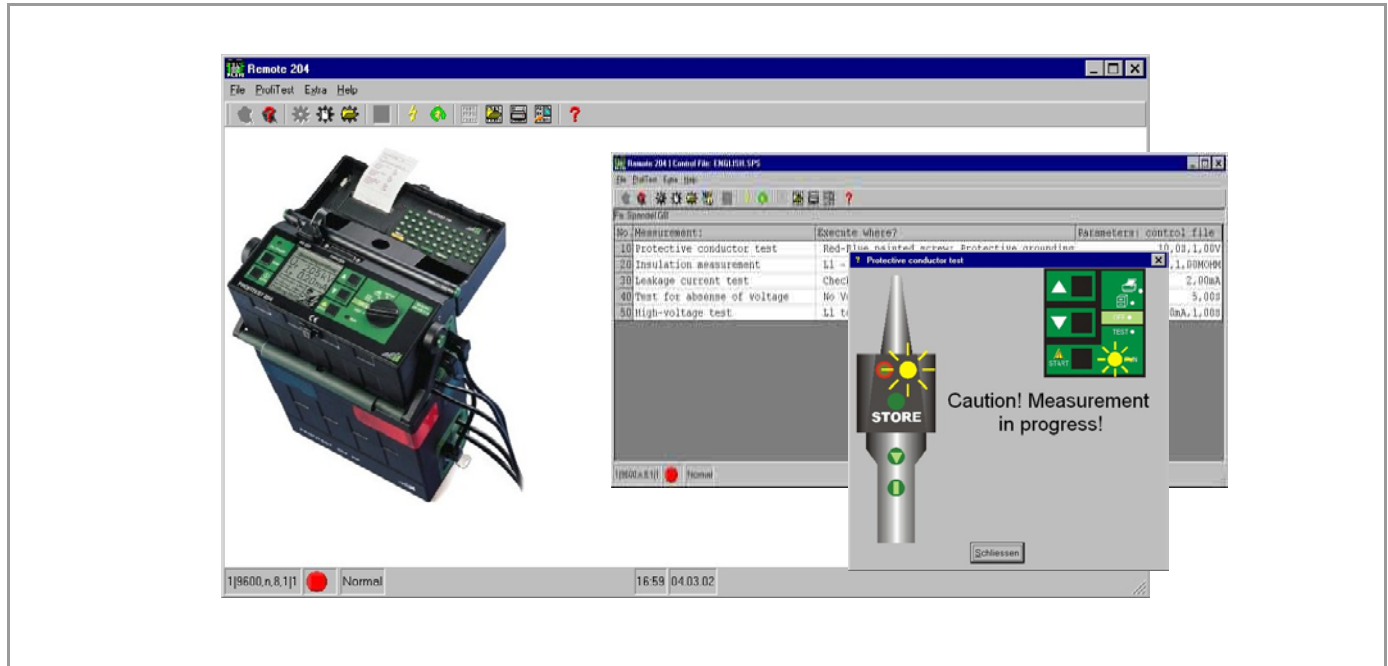


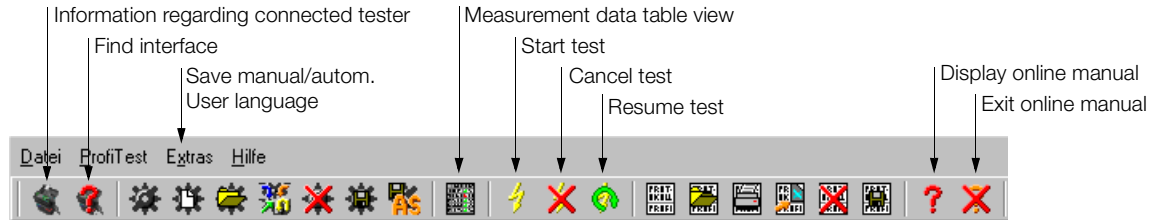
# Remote 204

Control Software for PROFITEST 204, 204L, 204HP and 204HV Test Instruments

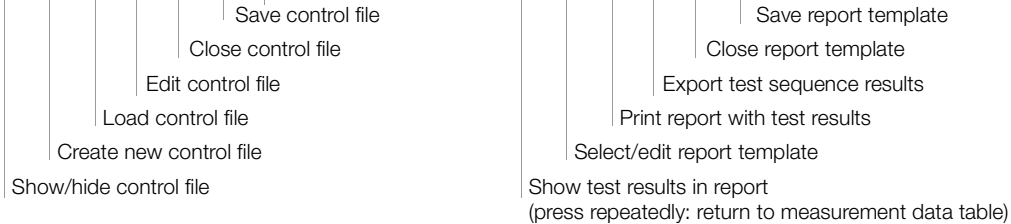
3-349-193-15

1/2.02





**Menu bar**



**Status line**



Measurement in progress System message  
COM 2 | 9600 baud, n, 8 bits, 1 stop bit | 1  
Time hh:mm

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## 1 System Requirements:

- Windows PC with Pentium processor or higher
- MS Windows 95, 98, NT 4.0 or 2000
- 32 MB RAM for Win 95 or 98, 64 MB RAM for Win NT 4.0 or 2000
- CD ROM drive
- Approx. 20 MB available hard disk memory

## 2 Applications

Remote 204 PC software allows for the execution of automated test sequences instead of manually triggered individual tests with the Profitest/MetraMachine 204 test instrument.

This includes the creation of control files, execution of tests in accordance with control files, reports generation and data export. A data format is utilized to this end which can easily be exported to all common spreadsheet programs for further processing.

### Remote 204 provides users with the following functions:

- 3 user interface languages
- 2 serial ports are supported, by means of which a PROFITEST 204 can be activated
- Read out information concerning the test instrument
- Select a control file for executing of a test sequence
- Create new control files, and edit existing files
- Execute tests automatically with menu-driven user interface
- Skip, interrupt and resume tests
- Create new report templates, and edit existing templates
- Save test data manually or automatically
- Print test data out in report form
- Convert data to a common format for processing in a table
- Display online manual
- Control files can be imported from PROFI SPS 204 for DOS.

### 3 Safety Precautions

---




#### Attention!

Observe the safety precautions in the operating instructions included with the PROFITEST 204, 204L, 204HP and 204HV. Before starting automated test sequences, make sure that no hazardous situations will develop.

---

### 4 Initial Start-Up

#### 4.1 Installing Remote 204 Software to the PC

- ⇨ Connect the PC to mains power and switch it on.
- ⇨ Double click the setup.exe file to start installation, and follow the instructions displayed by the installation assistant. A program icon is added to your start menu.
- ⇨ Start the Remote 204 program by clicking the  icon in the start menu.
- ⇨ Select the desired user language:  
*Menu selection: Extras ⇨ Language ⇨ German/English/French*

#### 4.2 Connecting the Interface Cable

- ⇨ Make sure that the PC and the test instrument are disconnected from the mains, or switched off.
  - ⇨ Use the Z3241 interface cable included with the PROFITEST 204 in order to connect it to your PC.
- 





#### Attention!

Use of an unsuitable interface cable may result in damage to the PROFITEST 204. In particular, cables may not be used which establish a connection between connector pin 9 and any other connector pins!

---

- ⇨ Connect the RS 232 interface at the PROFITEST 204 to the COM1 or COM2 port at your PC.

#### 4.3 Communication Between the Test Instrument and the PC

- ⇨ Connect both devices to mains power and switch them on.
  - ⇨ Start the Remote 204 program by clicking the  icon in the start menu.
  - ⇨ The program is capable of recognizing a connection to the test instrument at the COM1 or COM2 port:  
*Menu selection: Profitest ⇨ Search COM1 or COM2*
  - ⇨ If you are not sure which port has been used, both ports can be checked for a possible connection automatically:  
*Menu selection: Profitest ⇨ Automatic search*  
or  
*Click the following button:* 
- 




#### Note

Only the COM1 and COM2 ports are supported.

During data transmission to or from the PROFITEST 204, the mouse is disabled if it is connected to the COM1 port. This only occurs during data transmission.

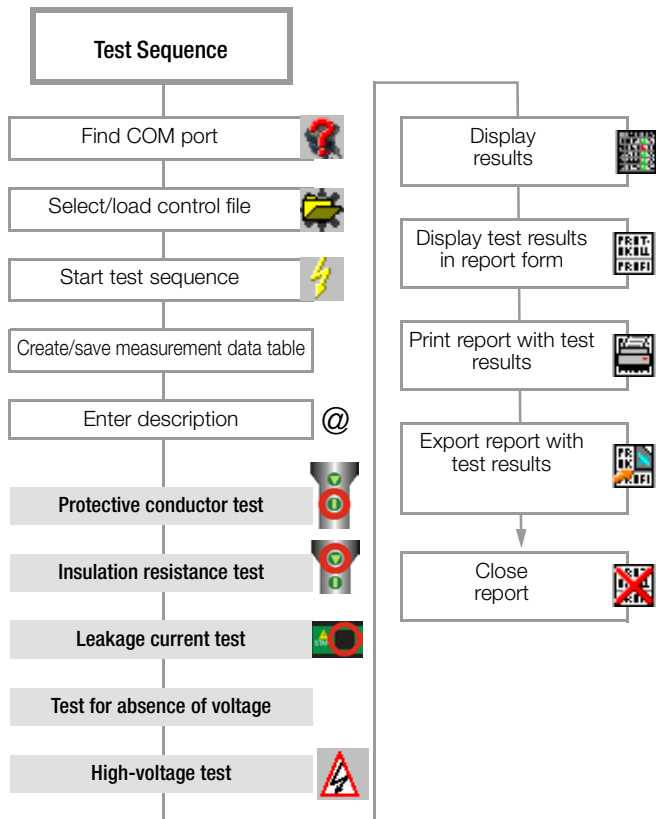
If the test instrument is connected to the COM2 port, the status LED at the COM port lights up green after the first search operation. Searching for the interface, or the test instrument, may have to be executed a second time. A message then appears displaying information regarding the PROFITEST 204.

---

- ⇨ After the correct COM port has been activated, information concerning the connected test instrument can be queried at any time:  
*Menu selection: Profitest ⇨ Info about Profitest*  
or  
*Click the following button:* 

## 5 Automated Machine Testing Using a Control File

### Automated Test Sequence Flowchart




### 5.1 General

The following steps must be executed in order to test a machine or a piece of equipment with the help of a control file. Refer to chapter 6 regarding the creation of control files.

### 5.2 Selecting a Control File and Creating a Measurement Data Table


The interface between the test instrument and the PC must be activated in order to execute the following test sequence (see chapter 4.3).

- ⇨ Select a control file:  
*Menu selection:* File ⇨ Control file ⇨ Load  
or  
*Click the following button:* 

A list of control files which have been saved to the Remote204 directory appears (file extension: “.SPS”).

- ⇨ Select the desired control file and acknowledge with **Load**.

The individual tests included in the test sequence are displayed in a table.

- ⇨ Select the following menu functions:  
*Menu selection:* File ⇨ Test ⇨ Start test  
or  
*Click the following button:* 



#### Note

After creating a new control file (see chapter 6) it must first be closed and reloaded before measurement can be started. If the COM port to which the test instrument is connected has not yet been activated, you will be prompted to execute COM port search before starting the test sequence.

If a PROFITEST 204 has already been recognized and a control file has been selected (see Selecting a Control File), a table appears which contains a list of the tests to be performed, in the order in which they will be executed.

- ↪ A dialog box appears at the same time, by means of which a file name must be selected. Data from the tests to be performed are saved to the selected file. All of these files end with the “.TAB” extension.
- ↪ Enter a new file name ending with “.TAB”. Otherwise, data in the currently selected file will be overwritten. Acknowledge your selection with Save.
- ↪ Enter the required data for the tests to be performed to the “Start test” dialog box as shown below:  
Entered data appear at the top of the test report.

- ↪ Acknowledge your entries with **OK**. The test sequence is now started. The measurement data table (with 5 columns) is displayed after each individual test has been completed:

**Column Contents**

- 1 Consecutive number for individual test no. 10, 20, 30 ...
- 2 Type of measurement for individual test (Measurement:)
- 3 Comment for individual test (Execute where?)
- 4 Test sequence (OK? or error)
- 5 Individual test results (Measured value)

### 5.3 Execution of the Individual Tests



**Note**

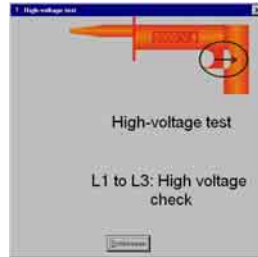
The connection between the PC and the test instrument may not be interrupted during testing. Measuring parameters for long-term measurement should not be used for automatic test sequences.

The individual tests listed in the measurement data table are now executed in the order in which they appear.

Each time the test instrument is ready to perform the next measurement, a prompt window appears with the following content:

- Type of test
  - Measuring point (only if specified in the control file, see chapter 6.2), otherwise the test type is displayed here once again.
  - Marking (red or black circle) which identifies the start key or the trigger
- ↪ Start each individual test as described in the prompt windows which appear:





**Exception:**

No prompt appears for the test for absence of voltage, and voltage measurement starts immediately. Switch the device under test off, and time measurement is started automatically.



After completion of each measurement, a window appears with the message:

- Pass
- or
- Fail
- (In the event of an error message, an information window is displayed as well.)

**5.4 Saving Test Results**

Test results can be saved manually each time the prompt appears, or automatically after each measurement. Manual or automatic storage must be selected via the menu before the test sequence is started.

• **Manual**

*Menu selection:*

Extras ⇨ PC memory mode ⇨ Manual

In order to save test results, the **STORE** key at the remote control or on the test instrument must be pressed and held for approximately 1 second. Either key can be used, even if only the key on the test instrument is highlighted.

The prompt window for the next test appears.

• **Automatic**

*Menu selection:* Extras ⇨ PC memory mode ⇨ Automatic

Test results are saved to memory automatically after each measurement. The prompt window for the next test appears.

**Exception: Test for Absence of Voltage**

Storage to memory must be triggered manually for this test.



**5.5 Skipping, Interrupting, Resuming and Concluding Tests**

It may be advisable to skip or repeat a given individual test if an error message appears, or to interrupt the entire test sequence and resume execution later, after the cause of the error has been eliminated.

⇨ **Skipping Individual Tests:** Press the F4 key to skip the pending test.

The following prompt appears in the event of an error message:

Save, Repeat, Skip

If the test is skipped, a corresponding comment appears in the test report.

⇨ **Interrupting the Test Sequence:**

*Menu selection:* File ⇨ Test ⇨ Interrupt

or

Press the ESC key or click the following button:





## Note

If a test is interrupted, and if the test sequence is changed and saved under a different name, the original test sequence cannot be resumed.

### Resuming the Test Sequence:

Menu selection: File → Test → Resume

or

Click the following button: 

In order to resume the test sequence, the original control file must be selected.

### 5.5.1 Test Results Display

After all of the tests have been executed, a corresponding window appears.

→ Acknowledge this window.

All of the results of the individual test are listed in the 5<sup>th</sup> column of the measurement data table.

### 5.6 Viewing, printing and Exporting the Report

The data record for the test sequence is saved to two files with different data formats:

One file name ends with the “.TAB” extension, and the other ends with the “.XLK” extension (Excel import file).

#### Displaying Measurement Data Without a Report Template

The display can be switched from the measurement data table, to a representation of measurement data as they will be entered to the report:

→ Click the following button: 

#### Displaying the Report

In order to display the test results in report form, click the report template button and select the desired report template from the list which then appears:

→ Click the following button:  → filename.PRN

### Printing the Report

The test report (report template with test results) can be printed out as follows to a printer connected to the PC:

→ Menu selection: File → Report → Print

or

Click the following button: 

You are then prompted to select the desired test template (.PRN), the desired printer (with the usual Windows printer selection dialog box) and a font size from 6 to 12.

### Exporting the Report

The test report (report template with test results) can be exported, i.e. saved as a text file (filename.TXT), and can then be opened with a text editor:

→ Menu selection: File → Report → Export

or

Click the following button: 

You are then prompted to select the desired test template (.PRN), and to enter a name for the text file (filename.TXT). The default file name is the name used for the measurement data file (filename.TAB) with the “.TXT” extension.



## Note

The text file can be edited with any word processing program. However, vowel mutations (ä, ö, ü etc.) and special characters such as Ω and μ are either omitted or displayed incorrectly after conversion from the ASCII to the ANSI character set. If you create your own reports, you can prevent this problem by avoiding the use of these characters.



## 6 Layout, Creation and Import of Control Files

So-called control files can be created in order to establish test sequences for given machine types. These files must always end with the “.SPS” extension. They are used to guide the inspector through the entire test sequence in an interactive fashion.

A control file consists of a header with a description of the machine or piece of equipment to be tested, a data frame containing all of the information required for the individual measurements, and any desired number of comments.

### Comments

Each comment should occupy its own line, and must be preceded by a semicolon (;). Comments have no effect on the test sequence and only serve as an orientation aide during test sequence creation.

### 6.1 The Header

The header begins with the “@DESC” control command, and includes the same description of the control file which appears in the file selection dialog box in quotation marks (“ ”).

Example:

```
.  
.   
.   
;Comment   
;Comment   
@DESC   
"Claw-field synchronous machine type Ax3 - 380V"   
;Comment   
.   
.   
.
```

### 6.2 The Data Frame

The data frame follows the header, always begins with the “@TEST” command and ends with the “@END” command.

#### The Command Line

**test number : measuring point & test type : measurement : parameters**

A command line consists of four function groups which are described below.

Function groups are delineated within the command line with colons (:). Blanks may also be entered for improved legibility.

The individual command lines are executed sequentially.

#### The Test Number

Test numbers for the various measuring points have six digits and can be freely selected by the user.

#### Measuring Point & Test Type

Descriptions assigned here to the measuring points or test locations appear in the prompts during the test sequence.

If more than 20 characters per description are used, the text might not fit onto the A4 sheet when the report is printed out. This depends upon the utilized printer and the selected font size. The test type does not have to be entered. It is always displayed automatically.

#### Measurement (measurement type, test type)

The desired test is selected at the test instrument by the PC with the “Measurement” function. The measurement or test type is selected by means of a predefined number:

- 1: Protective conductor test
- 2: Insulation test
- 3: Leakage current test
- 4: Voltage measurement
- 5: Voltage test

## Parameters

The configuration of parameters is optional. If no parameters are entered, the test instrument uses its current parameters configuration.

If a set of parameters is specified, the individual parameters are delineated with commas (,).



### Attention!

Only those parameters may be entered which can be manually configured at the test instrument, and values must lie within the limits specified in the operating instructions included with the PROFITEST 204. The user alone is responsible for correct entry of parameters!

As a rule, incorrectly entered parameters are ignored by the PROFITEST 204, although they may also result in malfunctioning of the test system in some cases.

## Sample Data Frame

```
.  
. .  
. .  
@TEST  
000001: "1.bottom screw – PE test" : 1 : 3s,100V  
000020: "L1-PE at plug – insulation test" : 2 : 1kV,10MOHM  
Number: "measuring point – test type" : measurement : parameters  
. .  
. .  
@END
```

Comment lines may be entered between the command lines.

## Sample Control File in Editing Mode

```
Steuerrdatei: ENGLISH SPS  
: erzeugt von: Remote 204 Version: 1.0.614 am 04.03.02  
:  
: Es folgt die Beschreibung der Anlage fueres Protokoll  
@DESC  
"Fa. Spindel GD"  
: Als naechstes werden die einzelnen Tests aufgefuehrt.  
@TEST  
: Protective grounding check  
000010 "Red-Blue painted screw: Protective grounding check" 1.10s,1V  
: Isolation measurement  
000020 "L1 - PE: Isolation measurement" 2.500V,10MOHM  
: Leakage current check  
000030: "Checkpoint A: Leakage current check":3:2mA  
: No Voltage check  
000040: "No Voltage check":4:5s  
: High voltage check  
000050: "L1 to L3: High voltage check":5:1s,1000V,10mA,1s  
: damit ist die Maschine geprueft  
@END
```

The above sample is used as a model for the creation of new control files. It can be modified and expanded as desired.

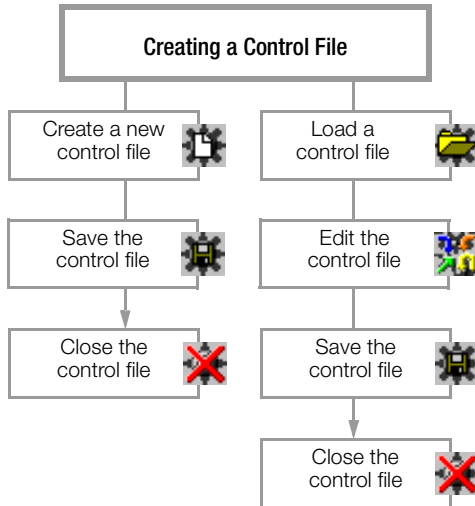
## Sample Measurement Data Table: control file after exiting the editing mode

No.	Measurement:	Execute Where:	Parameters: control file:
10	Protective conductor test	Red-Blue painted screw: Protective grounding	10,9s,1,00V
20	Insulation measurement	L1 - PE: Isolation measurement	500V,1,00MOHM
30	Leakage current test	Checkpoint A: Leakage current check	2,00mA
40	Test for absence of voltage	No Voltage check	5,00s
50	High-voltage test	L1 to L3: High voltage check	1,00s,1,00kV,10,0mA,1,00s

### 6.3 Creating a Control File

New control files can be created, or existing files can be loaded and edited (edit mode) according to individual needs, and then saved with a new file name (save as).

After a control file has been loaded, it appears as a table in the display mode. Enter the editing mode (edit) in order to edit the file.



A sample file can be loaded during initial start-up (MASCH.SPS), which can be edited to suit your individual needs (see previous chapter).

### Control File Functions

#### ⇨ Create new control file (includes standard command lines):

Menu selection: File ⇨ Control file ⇨ Create

or

Click the following button: 

A file name must be entered immediately in order to create a new control file.

#### ⇨ Load a control file:

Menu selection: File ⇨ Control file ⇨ Load

or

Click the following button: 

If another file is already loaded, it is closed automatically.

#### ⇨ Show or hide the control file (after loading a control file):

Click the following button: 

#### ⇨ Edit a control file (select editing mode):

Menu selection: File ⇨ Control file ⇨ Edit

or

Click the following button: 

#### ⇨ Save a control file (only possible in editing mode):

Menu selection: File ⇨ Control file ⇨ Save

or

Click the following button: 

#### ⇨ Save a control file with a new name (only possible in editing mode):

Menu selection: File ⇨ Control file ⇨ Save as

or

Click the following button: 

#### ⇨ Close a control file (only possible in editing mode):

Menu selection: File ⇨ Control file ⇨ Close

or

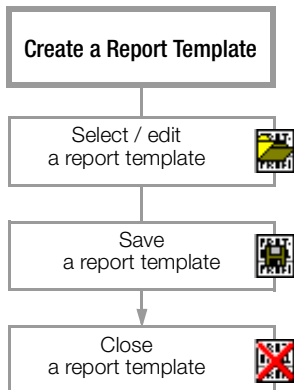
Click the following button: 

## 6.4 Importing Control Files from the PROFI SPS 204

Control files can be imported to Remote 204 for Windows from PROFI SPS 204 for DOS.

- ⇒ Copy all \*.SPS files to the following directory to this end:  
... \Programs\GMC\Remote204\Control files

## 7 Creating Report Templates



Machine and equipment approval reports can be generated directly with Remote 204. Test results from the files containing test data are entered into report templates to this end. The report templates can be laid out as desired.

One of the three report templates (Proto\_vx.prn) included in the Remote204 directory can be selected, or these templates can be edited and saved using a new file name.

## Report Template Functions

### ⇒ Load a report template (for editing):

Menu selection: File ⇒ Report ⇒ Edit template  
or

Click the following button: 

In order to prevent inadvertent changes to existing report templates, the user is prompted to save the file immediately, using a new name. If an already existing file name is entered, a warning appears indicating that the file in question will be overwritten.

### ⇒ Save a report template:

Menu selection: File ⇒ Report ⇒ Save  
or

Click the following button: 

### ⇒ Close a report template:

Menu selection: File ⇒ Report ⇒ Close  
or

Click the following button: 

In order to assure that changes are not lost, the user is prompted to save the file with a file name.

If an already existing file name is entered, a warning appears indicating that the file in question will be overwritten.

If the procedure is cancelled, the report template is closed and changes are not saved.

## Keywords

Keywords have been specified which allow Remote 204 to insert important data at the correct position within a report. The keywords function as placeholders for data which the user is automatically prompted to enter, for example to the “Start test” dialog box (see chapter 5.2 and sample templates).

List of keywords and their meanings:

Keywords whose content or meaning is entered to the “Start test” dialog box:

- @DESC\_A: Description/comment regarding the equipment/machine under test
- @DESC\_B: Additional comment, e.g. drawing number
- @DESC\_C: Additional comment, e.g. customer
- @DESC\_D: Additional comment, e.g. code word
- @MAC: Machine/equipment or report number

Additional keywords:

- @NAME: Type of utilized test instrument (PROFITEST 204)
- @SER: Serial number of the utilized test instrument
  
- @DATE: Date of last test performed on equipment/machine
- @TIME: Time of last test performed on equipment/machine
- @NUM(x): Number of times test type x has been performed
- @VAL(x): Read out of all measuring points for equipment/machine for test type x
- @BAD(x): Read out of all measuring points for equipment/machine, at which limit values were exceeded during test type x
- @RESULT(x): Insertion of the word “FAIL” if at least one test of test type x was failed, or “PASS” if all tests were passed.

Definition of Test Type x:

- 0: All tests, i.e. 1 through 5
- 1: Protective conductor test
- 2: Insulation test
- 3: Leakage current test
- 4: Voltage measurement
- 5: Voltage test

## 8 List of System Messages

Indication – Error Message	Meaning – Cause – Remedy
Incorrect measurement performed	A different key (other than the recommended key) was activated, and the wrong measurement has been performed as a result.
Incorrect parameters used for measurement	Make sure that parameter values do not violate valid limits.
Connection to COM2 port interrupted	<ul style="list-style-type: none"><li>– The COM1 port is queried first during automatic interface recognition. If a device other than the PROFITEST 204 is connected to COM1, it is not recognized and the error message is displayed. If this is the case, conduct a search for the PROFITEST 204 specifically at the COM2 port.</li><li>– Check interface connections.</li></ul>

## 9 Online Manual

If a printed manual is not available on-site, the online manual can be queried.

⇨ *Menu selection:* Help ⇨ Display manual  
or

*Click the following button:* 

or

*Press the F1 key.*

⇨ *Menu selection:* Help ⇨ Close manual  
or

*Click the following button:* 

### 9.1 Operating Instructions as PDF Data File

In addition to the online manual, operating instructions on the included CD ROM can be viewed in PDF format with the help of Acrobat Reader, and printed out.

German version: ba\_d.pdf

English version: ba\_gb.pdf

Acrobat Reader as of version 3 is required, although version 4 or higher is advisable.

## 10 Product Support

If required please contact:

GOSSEN-METRAWATT GMBH

Product Support Hotline

Phone: +49 911 86 02 - 112

Fax: +49 911 86 02 - 709

e-mail [vmp.info@gmc-instruments.com](mailto:vmp.info@gmc-instruments.com)

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