



**Model** ETX  
ETPX  
DTX  
DTMX  
KXE  
MST  
TS-232  
MZ-232  
MZ-USB  
MZ-422  
FS-232  
FS-USB  
FS-422  
FSR-422  
FS-WLAN  
SCD-1  
SC-PM

# » Tension Inspect 3 « Instruction Manual

*Valid as of: 01.10.2016 • Please keep the manual for future reference!*



# Contents

|                                                                        |           |
|------------------------------------------------------------------------|-----------|
| <b>1 The »Tension Inspect 3« program .....</b>                         | <b>3</b>  |
| 1.1 System requirements .....                                          | 3         |
| 1.2 Installing »Tension Inspect 3«.....                                | 3         |
| 1.3 Using »Tension Inspect 3«.....                                     | 4         |
| 1.3.1 Basic settings .....                                             | 5         |
| 1.3.2 Start and stop the tension value display.....                    | 6         |
| 1.3.3 Hi/Lo set-points.....                                            | 7         |
| 1.3.4 Graph adjustments.....                                           | 7         |
| 1.3.5 Print and data transfer.....                                     | 8         |
| 1.3.6 Save and load the readings.....                                  | 8         |
| 1.3.7 Memory review .....                                              | 9         |
| 1.3.7.1 Download the tension data from the ETX, ETPX and DTX to the PC | 10        |
| 1.3.7.2 Graph adjustments.....                                         | 10        |
| 1.3.7.3 Print and data transfer .....                                  | 10        |
| 1.3.7.4 Save the readings .....                                        | 11        |
| 1.3.8 Online recording .....                                           | 11        |
| <b>2 Correspondence .....</b>                                          | <b>11</b> |

# 1 The »Tension Inspect 3« program

## 1.1 System requirements

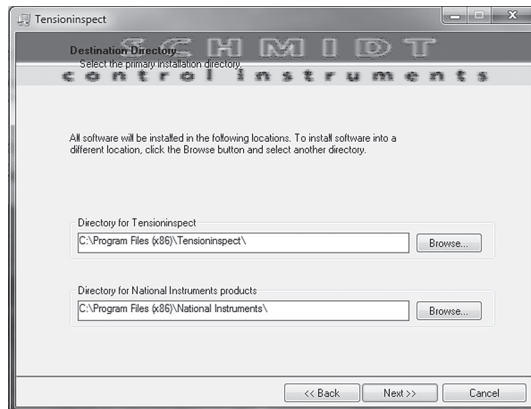
Computer: PC  
Operating system: Windows 7 and higher (32/64 Bit)  
Hard disk space: Approx. 200 MB  
Installation: CD-ROM drive

## 1.2 Installing »Tension Inspect 3«



**To be able to restore the original files in case problems occur after the installation, you should make a backup of your hard disk contents before you start installing. In no event will Hans Schmidt & Co GmbH be held liable for any data loss or damage.**

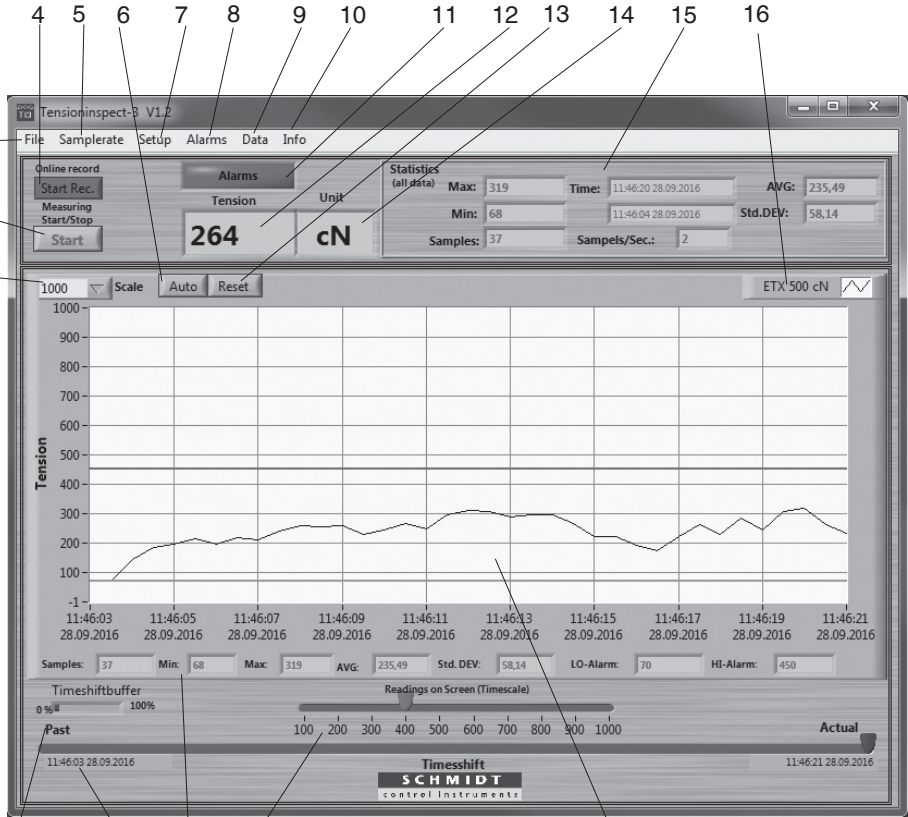
1. Insert the CD-ROM with the »Tension Inspect 3« program into the CD-ROM drive.
2. Start the installation process by double-clicking the application file.



3. Follow the instructions on the screen, to install the software »Tension Inspect 3« and the corresponding USB driver.
4. At the end, click the "Finish" button, to finish the installation process.

1.3 Using »Tension Inspect 3«

- Double-click the »Tension Inspect 3« icon to start the program.  
The program window opens.



- |   |                 |                        |                            |
|---|-----------------|------------------------|----------------------------|
| 1 | Menu file       | Save as CSV            | Chapter 1.3.6              |
|   | Menu file       | Load CSV               | Chapter 1.3.6              |
|   | Menu file       | Exit                   | Close »Tension Inspect 3«  |
| 2 | Button          | Start/Stop             | Chapter 1.3.2              |
| 3 | Choice box      | Scale                  | Chapter 1.3.4              |
| 4 | Button          | Start Rec.             | Chapter 1.3.8              |
| 5 | Menu samplerate | Samplerate             | Select the sampling rate   |
| 6 | Button          | Auto                   | Chapter 1.3.4              |
| 7 | Menu setup      | Setup                  | Chapter 1.3.1              |
| 8 | Menu alarms     | Enable Alarms          | Chapter 1.3.3              |
|   | Menu alarms     | Show Alarms            | Chapter 1.3.3              |
|   | Menu alarms     | Clear Alarms           | Chapter 1.3.3              |
| 9 | Menu data       | Clear Data             | Clear all measuring values |
|   | Menu data       | Create HTML-Report     | Chapter 1.3.5              |
|   | Menu data       | Export Screen to Excel | Chapter 1.3.5              |
|   | Menu data       | Memory Review          | Chapter 1.3.7              |

### 1.3 Using »Tension Inspect 3« (cont.)

|    |                            |                                                                                   |
|----|----------------------------|-----------------------------------------------------------------------------------|
| 10 | Menu info                  | Information about »Tension Inspect 3«                                             |
| 11 | Display Alarms             | Change to red, if the reading exceed or underrun the setpoint durring a measuring |
| 12 | Display Tension            | Current reading                                                                   |
| 13 | Button Reset               | Chapter 1.3.4                                                                     |
| 14 | Display Unit               | Unit of measure of the readings                                                   |
| 15 | Display Statistics         | Display of statistical values of the measurement                                  |
| 16 | Display Model              | Display the connected unit                                                        |
| 17 | Display Timeshift Buffer   | Chapter 1.3.4                                                                     |
| 18 | Display Timeshift          | Chapter 1.3.4                                                                     |
| 19 | Display Statistics Diagram | Display the statistical values, shown currently at the graph.                     |
| 20 | Display Readings on Screen | Chapter 1.3.4                                                                     |
| 21 | Display Tension            | Readings as graph, as well as the Hi/Lo Set-points (only when activated)          |

#### 1.3.1 Basic settings

##### Requirements:

- The required measuring unit is connected to the PC.
- The measuring unit is switched on

##### To edit the settings:

- Click on the menu SETUP to open the dialog box.
- You can now either keep the default values preset in the input boxes or customize them for your specific requirements.

The figure below shows the factory-preset defaults for a tension meter model ETX-500.

Enter text for the header describing the stored data

For testing the connection between the PC and the connected tension meter

Select the tension meter model

Transfer speed of the serial interface

Enter the COM Port (1-4) to which the tension meter is connected

Activates recording of the values which exceed or underrun the Hi/Lo set-points

Determine the file for saving data of online recording

Select the tension range

Select the unit of measure.

Select the sample rate

Damping

Changing the background colour to black

Select the max. number of readings, displayed at the graph

Enter the Hi/Lo set-points

1.3.2 Start and stop the tension value display

Requirements:

- Click on Clear data in the menu Datat.  
All readings shown in the Tension display, if any, are cleared.

Start:

- Click the Start button to activate the display of tension values.  
The button shows Stop.

Tension value display:

|                            |                                                                                                            |
|----------------------------|------------------------------------------------------------------------------------------------------------|
| Tension display            | Current graph, as well as high set-point (red) and low set-point, if activated in the menu Alarms or Setup |
| Tension display            | Current digital value                                                                                      |
| Statistics display         | Continuously updated statistics                                                                            |
| Statistics Diagram display | Continuously updated statistics, of readings, shown in the graph                                           |

Stop:

- Click now the Stop button.  
The display of the tension values stops.  
The button shows Start.

### 1.3.3 Hi/Lo set-points

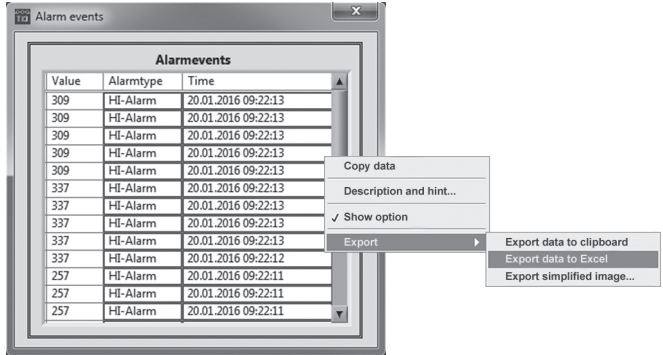
»Tension Inspect 3« has a comparison function. Thereby the displayed value will be compared with the preset set-points. During exceeding or underrunning a set-point, the background of the display Tension change to red. The background of the display No Alarms change the colour permanently to red and shows now Alarms after exceeding or underrunning a setpoint for one time.

Enable Alarms

Activates recording of the values which exceed or underrun the Hi/Lo set-points

Show Alarms

By clicking Show Alarm at the menu Alarms the window „Alarm events“ will be open.



By opening the context menu in the window „Alarm events“ the values exceeding or underrunning the set-points can be exported to excel by using the menu items „Export“ and „Export data to excel“.

Clear Alarms

By clicking Clear Alarms in the menu Alarms all values in the window „Alarm events“ will be cleared.

### 1.3.4 Graph adjustments

Scale

The maximal tension value of the diagram can be adjusted (Y-axis, starts at zero).

Auto

Automatic scaling of the Y-axis depending to the measured tension values.

Reset

Change of scaling from mode Auto to Scale

Readings on Screen (Timescale)

To set the number of readings to be shown in the diagram (X-axis). The scroll bar turns to red, if more readings are selected for the diagram than measured.

Timeshift Buffer

Indicates in % the fill level of the memory. The maximal numbers of readings will be set in the Setup.

Timeshift

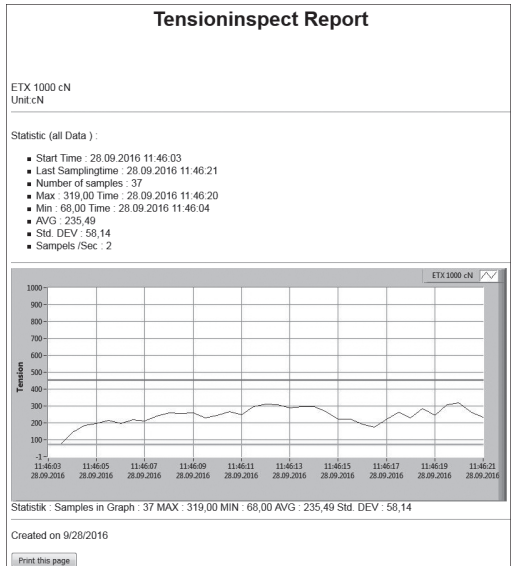
To select the timeframe of a series of measurements, that should be displayed in the diagram. Is the setup Value of Readings on Screen bigger or equal to the recorded readings, the scroll bar cannot be moved.

### 1.3.5 Print and data transfer

#### Print:

- Click Creat HTML-Report in the menu Data to open the print preview.
- Click the Print this Page button to open the printer setup box.

The print-out includes the statistical data of the series of measurements, the current displayed graph and the statistical values of the graph.



#### Data transfer:

- Clicking Export Screen to Excel in the menu Data copy the readings, which are displayed at the graph to an excel file (reading, date, time). With the infixed readings, a graph can be created in the Excel file.

### 1.3.6 Save and load the readings

#### Save:

- The statistical data, as well as the single readings of a measuring can be saved after the measuring ends as CSV file, by clicking Save as CSV in the menu File.

#### Load:

- Click Load CSV in the menu File and open the required file.  
The statistical data of the saved measuring, the graph and the statistical data of the graph are displayed in »Tension Inspect 3«

**i** It is possible to add readings to an existing file. In this case open the file and start a new series of measurements. The new readings will be added in the diagram. After this store the complete CSV file again. If any readings are in the internal memory before opening the existing file, the internal memory will be overwritten.

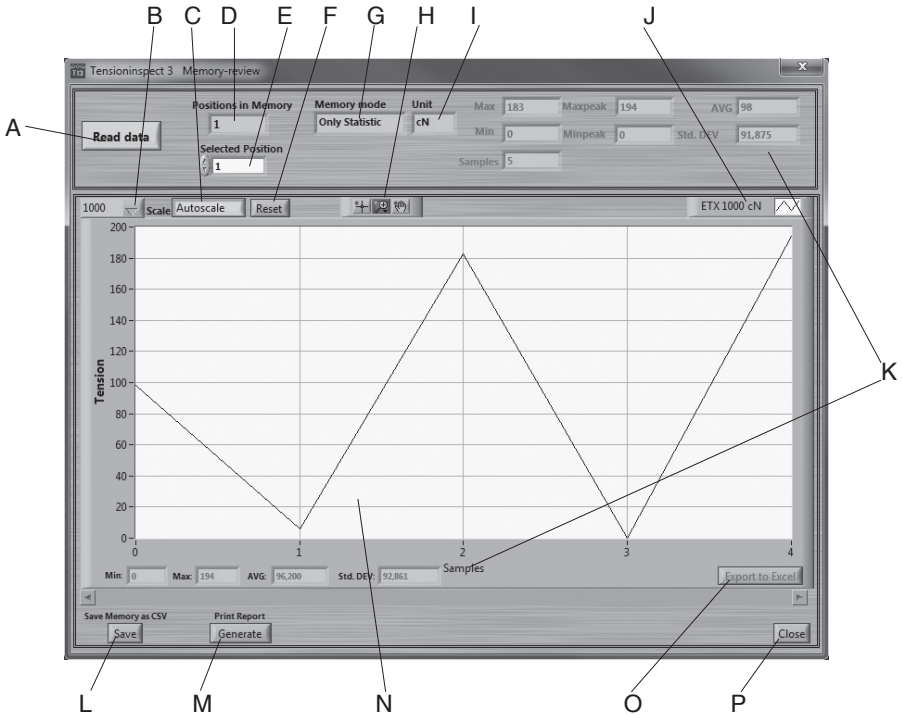
### 1.3.7 Memory review

(available only for ETX, ETPX and DTX)

With the »Tension Inspect 3« program you can download all the tension data stored in the memory of the connected tension meter.

#### Start the download

- Click Memory Review in the menu Data.
- The Memory Review window opens.



|   |            |                    |                                                         |
|---|------------|--------------------|---------------------------------------------------------|
| A | Button     | Read Data          | Chapter 1.3.7.1                                         |
| B | Choice box | Scale              | Chapter 1.3.7.2                                         |
| C | Button     | Autoscale          | Chapter 1.3.7.2                                         |
| D | Display    | Position in Memory | Number of saved series of measurement                   |
| E | Choice box | Selected Position  | Selected series of measurement                          |
| F | Button     | Reset              | Chapter 1.3.7.2                                         |
| G | Display    | Memory Mode        | Used memory mode during the measuring                   |
| H | Button     | Zoom               | Chapter 1.3.7.2                                         |
| I | Display    | Unit               | measuring unit of the readings                          |
| J | Display    | Type of Device     | Display the connected unit                              |
| K | Display    | Statistics         | Statistical data of the displayed series of measurement |
| L | Button     | Save               | Chapter 1.3.7.4                                         |
| M | Button     | Generate           | Chapter 1.3.7.3                                         |
| N | Display    | Tension            | Readings as graph                                       |
| O | Button     | Export to Excel    | Chapter 1.3.7.3                                         |
| P | Button     | Close              | Close Memory Review                                     |

1.3.7.1 Download the tension data from the ETX, ETPX and DTX to the PC

Requirements:

- Tension meter connected to the PC.
- Tension meter switched on.

To download the tension data:

- Click the Read Data button.  
The tension data stored in the tension meter are read into the PC.

Tension value display:

|                    |                                                          |
|--------------------|----------------------------------------------------------|
| Display Tension    | Graph of the displayed series of measurements            |
| Display Statistics | Statistical data of the displayed series of measurements |

1.3.7.2 Graph adjustments

|           |                                                                                                       |
|-----------|-------------------------------------------------------------------------------------------------------|
| Scale     | Manual scaling of the Y-axis which starts at „zero“. This feature can be activated by pressing Reset. |
| Autoscale | Automatic scaling of the Y-axis depending to the displayed readings of the diagram.                   |
| Reset     | Activates the scaling, which is set in the pop-up Scale.                                              |
| Zoom      | A big number of zoom features can be selected to enlarge a selected frame of the diagram.             |



The button Zoom and Reset work only if Autoscale is not activated.

1.3.7.3 Print and data transfer

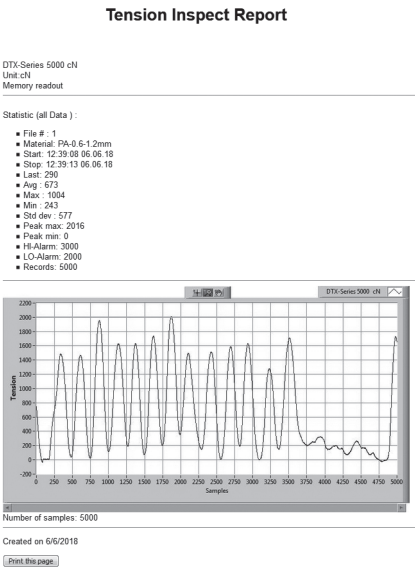
Print:

- Click the Generate button to open the print review.
- Click the Print this Page button to open the printer setup box.

The print-out includes the statistical data of the series of measurements and the current displayed graph.

Data transfer:

- The Export Screen to Excel button copies the readings of the desired series of measurements to an excel file (reading, date, time). With the infixed readings, a graph can be created in the Excel file.





#### 1.3.7.4 Save the readings

##### **Save:**

- With the button Save stored values (statistics and series of measurements) of the connected tension meter can be downloaded and stored as CSV file. The individual series of measurement can be selected.



**Readings which have be downladed and be stored  
as CSV file cannot be related to »Tension Inspect 3«**

#### 1.3.8 Online recording

- Click first the button Start/Stop and afterwards Start/Stop Rec. to start the continuously data recording. The recorded data is now saved as CSV file. If the file reaches a size of 10 MB, a new CSV file will be generated automatically for further data aquisition and saving.
- By clicking the button Start/Stop the continuously data aquisition is paused. Clicking Start/Stop again will continue the recording. The data will be saved in the last CSV file.
- By clicking the button Start/Stop Rec. the continuously data aquisition is finished. After clicking Start/Stop Rec. again the recorded data will be saved in a new CSV file.
- The location for saving the files can be determined in the menu Setup.

## 2 Correspondence

Should you have any questions regarding the program or operating instructions, or their use, please indicate above all the software version number.



**SCHMIDT-Test-Instruments**  
*indispensable in production monitoring,  
quality control and automation*  
**We solve your measuring problems:**



*Tension Meter*



*Force Gauge*



*Torque Meter*



*Tachometer*



*Speed- and Lengthmeter*



*Electronic Lengthmeter*



*Stroboscope*



*Screen Printing Tension Meter*



*Thickness Gauge*



*Yarn Package Durometer and Shore Durometer*



*Sample Cutter*



*Balance*



*Moisture Meter*



*Leak Tester*

**More than 75 years - Worldwide -**

**Hans Schmidt & Co GmbH**

**Mailing address:**

P. O. B. 11 54  
84464 Waldkraiburg Germany

**Shipping address:**

Schichtstr. 16  
84478 Waldkraiburg Germany

**Phone:**

int. + 49 / (0)8638 / 9410-0

**Fax:**

int. + 49 / (0)8638 / 4825

int. + 49 / (0)8638 / 67898

**e-mail:**

[info@hans-schmidt.com](mailto:info@hans-schmidt.com)

**Internet:**

<http://www.hans-schmidt.com>