
**Informacje udostępniane przez
DM-AM-KIT
wraz z oprogramowaniem
Diagnostic Manager - Professional Edition
(DTM-FC.ADM)**

wersja: 0708

Przeñośny zaawansowany zestaw diagnostyczny dla sieci PROFIBUS PA/Foundation Fieldbus

Konfiguracja PACTware

The screenshot shows the PACTware [Device catalog] application. The interface includes a menu bar (File, Edit, View, Project, Device, Extras, Window, Help), a toolbar, and a main workspace. A context menu is open over the 'FieldConnex Diagnostic Server' device, with the 'Add device' option highlighted in blue and enclosed in a red rectangle. The main workspace is divided into several panes:

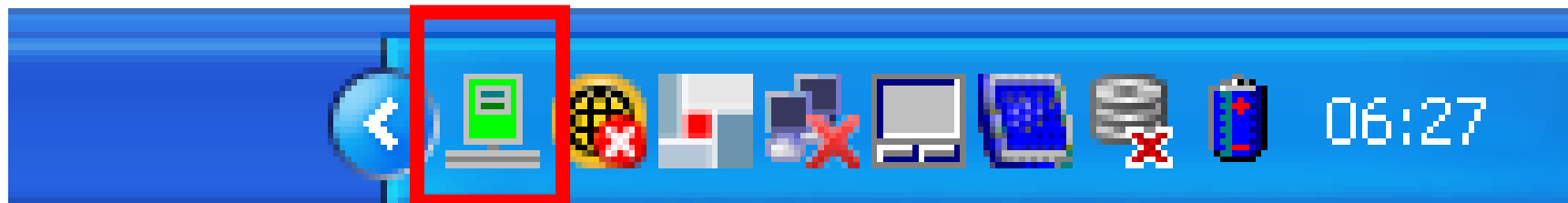
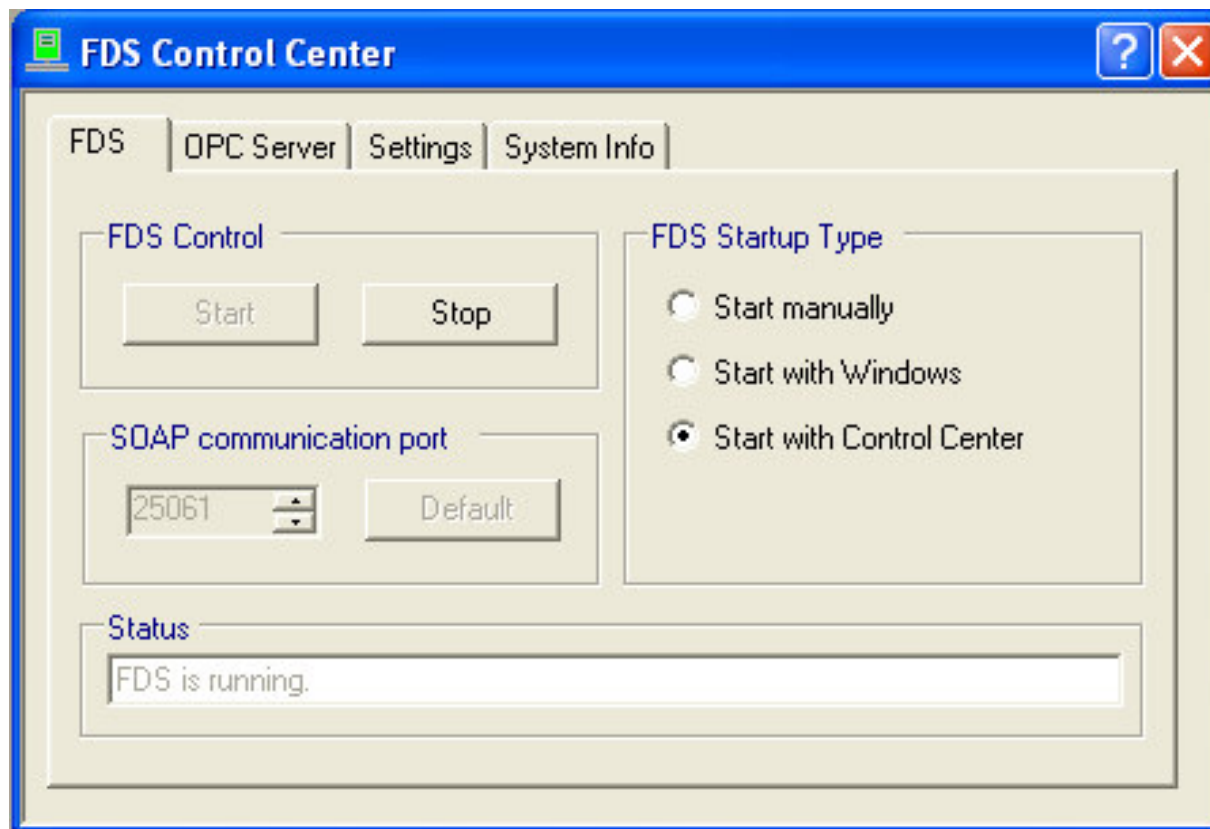
- Project:** Shows the current project structure, including 'HOST PC' and '<FDS>FieldConnex Diagnostic Server'.
- Device Catalog:** A tree view showing various device types and vendors, including CodeWrights GmbH, Comsoft GmbH, Endress+Hauser, ICS GmbH, PEPPERL+FUCHS GmbH, Device, Driver, Gateway, Softing AG, VEGA Grieshaber KG, and WIKA Alexander Wiegand GmbH.
- Table:** A table listing devices with columns for Device, Protocol, Vendor, and Group. The table contains the following data:

Device	Protocol	Vendor	Group
COM-RS232-300		PEPPERL+FUCHS GmbH	GU/UT-Devices
COM-RS232-9600		PEPPERL+FUCHS GmbH	P2P-Devices
FieldConnex Diagnostic Server		PEPPERL+FUCHS GmbH	FDT
P2P RS232 FDT		PEPPERL+FUCHS GmbH	FDT
- Vendor Filter:** A section with tabs for Vendor, Type, Group, and Protocol, and a checkbox for 'Show all devices'. Below it, it lists 'PEPPERL+FUCHS GmbH Driver' and 'PACTware KF*GU-*, KF*UT-*, E*UT-* communication driver'.

The status bar at the bottom shows the user is logged in as 'Administrator' and the window title is '<NONAME>'. The bottom right corner contains buttons for 'Update device catalog', 'Info', and 'Add'.

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FieldConnex Diagnostic Server



Przełożyliśmy zaawansowany zestaw diagnostyczny dla sieci PROFIBUS PA/Foundation Fieldbus

Połączenie z modułem diagnostycznym

The screenshot shows the PACTware software interface. The main window is titled "PACTware - [Device catalog]". The interface is divided into several panes:

- Project Pane:** Shows a tree view of the project structure. A context menu is open over the "DM-AM" device, with the "Connect" option highlighted by a red rectangle. Other options include "Disconnect", "Load from device", "Store to device", "Parameter", "Measured value", "Simulation", "Diagnostics", "Print", "Additional functions", "Add device", "Delete device", and "Properties DM-AM".
- Device Catalog Pane:** Lists various manufacturers and their devices. The "PEPPERL+FUCHS GmbH" folder is expanded, showing a list of devices with columns for "Device", "Protocol", "Vendor", and "Group".
- Table:** A table listing devices from PEPPERL+FUCHS GmbH. The data is as follows:

Device	Protocol	Vendor	Group
COM-RS232-300		PEPPERL+FUCHS GmbH	GU/UT-Devices
COM-RS232-9600		PEPPERL+FUCHS GmbH	P2P-Devices
FieldConnex Diagnostic Server		PEPPERL+FUCHS GmbH	FDT
P2P RS232 FDT		PEPPERL+FUCHS GmbH	FDT
- Footer:** Shows the user name "Administrator" and the system name "<NONAME>".

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Obsługa aplikacji

The screenshot displays the PACTware software interface for online parameterization of a diagnostic server. The window title is "PACTware - [DM-AM # Online parameterization]". The menu bar includes File, Edit, View, Project, Device, Extras, Window, and Help. The Project pane on the left shows a tree structure under "HOST PC" with "FieldConnex Diagnostic Server #". A context menu is open over the server, listing options such as Connect, Disconnect, Load from device, Store to device, Parameter, Measured value, Simulation, Diagnostics, Print, and Additional functions. The Additional functions sub-menu is expanded, showing options like Compare offline, Compare online, Set value, Analyze PROFIBUS PA, Analyze FOUNDATION Fieldbus, Firmware Update, About, Commissioning Wizard, Snapshot Explorer, History Data Export, Fieldbus Oscilloscope, and Segment Monitoring. The main workspace shows the "FieldConnex" logo and device details: Device Name: DM-AM, Segment Status: [checked], Device Tag: [empty], and Fieldbus Type: PROFIBUS PA. A tree view on the left lists "Label" with "DM-AM", "Segment", "Statistics", and "Field Devices" (containing Master (1), BARCON PA (50), VEGAPULS (51), APC-2000 (52), and ABB-2010T (53)). The right pane displays configuration options, including "Measure configured Field Devices only:" (unchecked), "Add new Field Device to Expected Configuration:" (with a >> button), and a table of "Configured Field Devices".

Bus Address	Field Device Tag	Active	Alarm	Remove
1	Master	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Remove
50	BARCON PA	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Remove
51	VEGAPULS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Remove
52	APC-2000	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Remove
53	ABB-2010T	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Remove

Below the table are buttons for "Remove all inactive, unconfigured Field Devices:" and "Add all unconfigured Field Devices to the Expected Configuration:". At the bottom, there is an "Unconfigured Field Devices" table with columns for Bus Address, Active, Add Configuration, and Remove.

Przenośny zaawansowany zestaw diagnostyczny dla sieci PROFIBUS PA/Foundation Fieldbus

Parametryzacja segmentu - OFFLINE

The screenshot shows the PACTware software interface for offline parameterization. The window title is "PACTware - [DM-AM # Offline parameterization]". The menu bar includes File, Edit, View, Project, Device, Extras, Window, and Help. The toolbar contains various icons for file operations and device management.

The Project tree on the left shows the following structure:

- HOST PC
 - [*] <FDS>FieldConnex Diagnostic Server #
 - [*] DM-AM #

The main workspace displays the FieldConnex logo and the following device information:

- Device Name: DM-AM
- Device Tag:
- Fieldbus Type: PROFIBUS PA

The "Label" tree on the left shows the following structure:

- DM-AM
 - Segment
 - Field Devices
 - Master (1)
 - BARCON PA (50)
 - VEGAPULS (51)
 - APC-2000 (52)
 - ABB-2010T (53)

The "Measure configured Field Devices only:" checkbox is unchecked. The "Add new Field Device to Expected Configuration:" button is disabled. The "Configured Field Devices" table is as follows:

Bus Address	Field Device Tag	Remove
1	Master	Remove
50	BARCON PA	Remove
51	VEGAPULS	Remove
52	APC-2000	Remove
53	ABB-2010T	Remove

The status bar at the bottom shows "Connected", "Database", and the user "Administrator".

Przeñośny zaawansowany zestaw diagnostyczny dla sieci PROFIBUS PA/Foundation Fieldbus

Parametryzacja segmentu - ONLINE

The screenshot shows the PACTware software interface for online parameterization of a FieldConnex segment. The window title is "PACTware - [DM-AM # Online parameterization]". The interface includes a menu bar (File, Edit, View, Project, Device, Extras, Window, Help) and a toolbar. The main workspace is divided into several sections:

- Project Tree:** Shows a hierarchy starting with "HOST PC", followed by "<[*]>FieldConnex Diagnostic Server #", and then "[*]DM-AM #".
- FieldConnex Logo:** Located in the upper left of the main workspace.
- Device Information:** Displays "Device Name: DM-AM", "Segment Status: ", "Device Tag:", and "Fieldbus Type: PROFIBUS PA".
- Field Device Configuration:** A list of devices under "Field Devices" is shown, including "Master (1)", "BARCON PA (50)", "VEGAPULS (51)", "APC-2000 (52)", and "ABB-2010T (53)". "BARCON PA (50)" is selected.
- Parameter Fields:** Includes "Field Device Tag:" (BARCON PA), "Field Device Address:" (50), "Field Device Status:" (Active, Alarm active, Data valid), "Signal Polarity:" (Standard), "Noise:" (15 mV), "Jitter:" (1,2 us), "Number Live List Appearances:" (1), and "Number of Pass Token misses:" (0).
- Field Device Signal Level Table:** A table with columns for Label, Low Out, Low Main, Actual, High Mai, High Out, Hyster, and Reset. The row for "Signal Level [mV]" shows values: 200, 641, 741, 843, 1200, 50, and a Reset button.

The bottom status bar shows "Connected" and "Device" icons, along with system tray icons and the user name "Administrator".

Przenośny zaawansowany zestaw diagnostyczny dla sieci PROFIBUS PA/Foundation Fieldbus

Diagnostyka segmentu - przykład

informacja o błędzie

możliwe przyczyny błędu

historia zdarzeń

Current Alarms

Description	Value
Segment	
⚠ DC Unbalance (Negative Pole)	-100 %

Alarm History

Date	Description
within last 24 hours	
2007-08-27 11:12:56	⚠ Segment: DC Unbalance (Negative Pole)
2007-08-27 11:12:49	⚠ Segment: DC Unbalance (Negative Pole)
2007-08-27 11:12:31	⚠ Segment: DC Unbalance (Positive Pole)
2007-08-27 11:12:26	⚠ Segment: DC Unbalance (Positive Pole)
2007-08-27 11:12:19	⚠ Segment: DC Unbalance (Positive Pole)
2007-08-27 11:12:16	⚠ Segment: DC Unbalance (Positive Pole)
2007-08-27 10:42:45	⚠ Segment: Jitter Level too high
2007-08-27 10:42:45	⚠ Segment: Segment Signal Level too high
2007-08-27 10:42:44	⚠ Segment: Jitter Level too high
2007-08-27 10:42:44	⚠ Segment: Jitter Level too high
2007-08-27 10:42:38	⚠ Segment: Jitter Level too high
2007-08-27 10:42:37	⚠ Segment: Jitter Level too high
2007-08-27 10:42:36	⚠ Segment: Jitter Level too high
2007-08-27 10:42:30	⚠ Segment: Jitter Level too high
2007-08-27 10:42:26	⚠ Segment: Jitter Level too high
2007-08-27 10:42:25	⚠ Segment: Jitter Level too high
2007-08-27 10:42:24	⚠ Segment: Jitter Level too high
2007-08-27 10:42:21	⚠ Segment: Jitter Level too high
2007-08-27 10:42:17	⚠ Segment: Jitter Level too high
2007-08-27 10:42:16	⚠ Segment: Jitter Level too high
2007-08-27 10:42:15	⚠ Segment: Jitter Level too high
2007-08-27 10:42:13	⚠ Segment: Jitter Level too high
2007-08-27 10:42:09	⚠ Segment: Jitter Level too high
2007-08-27 10:42:08	⚠ Segment: Jitter Level too high
2007-08-27 10:42:06	⚠ Segment: Jitter Level too high
2007-08-27 10:42:04	⚠ Segment: Jitter Level too high
2007-08-27 10:42:02	⚠ Segment: Jitter Level too high
2007-08-27 10:42:02	⚠ Segment: Jitter Level too high
2007-08-27 10:42:02	⚠ Segment: Jitter Level too high
2007-08-27 10:42:02	⚠ Segment: Jitter Level too high

Connection Fault
Please verify the segment wiring and cable shielding against a pole-to-shield connection of the negative pole(-) line to the shield. Focus your search especially on the terminal clamps of the Field Devices where such contacts are most likely. In galvanically non-isolated installations a pole-to-shield connection is transferred along the whole system. To find out where the short has occurred, disconnect single segments, exchange Power Conditioner in redundant systems one after the other and watch the diagnostic status meanwhile.

Water Ingress Fault
Please check the segment for any kind of possible dirt water ingress. Water ingress into a device and contact to the device's cable terminals may have led to direct/indirect connections between the positive pole signal and to the cable shield.

Configuration Fault
The limit value to be supervised is wrongly configured and does not match to the current installation. Please verify the value and adjust it in accordance to the typical and rated Voltage unbalance value for this segment.

Diagnostyka segmentu - przykład

The screenshot displays the PACTware software interface for diagnosing a PROFIBUS PA segment. The window title is "PACTware - [DM-AM # Diagnostics]". The menu bar includes File, Edit, View, Project, Device, Extras, Window, and Help. The project tree on the left shows a "HOST PC" with a sub-tree containing "<[*]>FDS>FieldCon" and "<[*]>DM-AM #". The main area shows the "FieldConnex" logo and device information: Device Name: DM-AM, Device Tag: (blank), and Fieldbus Type: PROFIBUS PA. The "Segment Status" is indicated by a yellow warning icon.

The "Current Alarms" panel shows a table with the following data:

Description	Value
Segment	
DC Unbalance (Positive Pole)	100 %

The "Alarm History" panel shows a list of alarms with the following columns: Date and Description. The list is filtered for "within last 24 hours".

Date	Description
2007-08-27 11:14:32	Segment: DC Unbalance (Positive Pole)
2007-08-27 11:14:20	Segment: DC Unbalance (Positive Pole)
2007-08-27 11:14:19	Segment: DC Unbalance (Positive Pole)
2007-08-27 11:13:05	Segment: DC Unbalance (Negative Pole)
2007-08-27 11:13:02	Segment: DC Unbalance (Negative Pole)
2007-08-27 11:12:56	Segment: DC Unbalance (Negative Pole)
2007-08-27 11:12:49	Segment: DC Unbalance (Negative Pole)
2007-08-27 11:12:31	Segment: DC Unbalance (Positive Pole)
2007-08-27 11:12:26	Segment: DC Unbalance (Positive Pole)
2007-08-27 11:12:19	Segment: DC Unbalance (Positive Pole)
2007-08-27 11:12:16	Segment: DC Unbalance (Positive Pole)
2007-08-27 10:42:45	Segment: Jitter Level too high
2007-08-27 10:42:45	Segment: Segment Signal Level too high
2007-08-27 10:42:44	Segment: Jitter Level too high
2007-08-27 10:42:44	Segment: Jitter Level too high
2007-08-27 10:42:38	Segment: Jitter Level too high
2007-08-27 10:42:37	Segment: Jitter Level too high
2007-08-27 10:42:36	Segment: Jitter Level too high
2007-08-27 10:42:30	Segment: Jitter Level too high
2007-08-27 10:42:26	Segment: Jitter Level too high
2007-08-27 10:42:25	Segment: Jitter Level too high
2007-08-27 10:42:24	Segment: Jitter Level too high
2007-08-27 10:42:21	Segment: Jitter Level too high
2007-08-27 10:42:17	Segment: Jitter Level too high
2007-08-27 10:42:16	Segment: Jitter Level too high
2007-08-27 10:42:15	Segment: Jitter Level too high
2007-08-27 10:42:13	Segment: Jitter Level too high
2007-08-27 10:42:09	Segment: Jitter Level too high

The bottom panel shows the status bar with "Connected" and "Device" indicators, and the user name "Administrator".

Przenośny zaawansowany zestaw diagnostyczny dla sieci PROFIBUS PA/Foundation Fieldbus

Diagnostyka segmentu - przykład

The screenshot displays the PACTware software interface for diagnosing a FieldConnex device. The window title is "PACTware - [DM-AM # Diagnostics]". The interface includes a menu bar (File, Edit, View, Project, Device, Extras, Window, Help), a toolbar, and a project tree on the left showing the device hierarchy: HOST PC > [*] <FDS>FieldConnex Diagnostic Server # > [*] DM-AM #.

Device information is shown in the top right: Device Name: DM-AM, Device Tag: (blank), Fieldbus Type: PROFIBUS PA, and Segment Status: (Warning icon).

The main area is divided into two panels:

- Current Alarms:** A table listing active alarms with their descriptions and values.
- Alarm History:** A table listing past alarms with their dates and descriptions.

Below the Current Alarms table, there are sections for "Termination Fault", "Device Error Fault", "Configuration Fault", and "Measurement executed at Spur", each with a brief explanation of the fault type.

Description	Value
Segment	
Jitter Level too high	8,0 µs
Segment Signal Level too high	1263 mV
Nodes (Segment 1)	
Address 51: Device's Signal Level too high	1228 mV
Address 53: Device's Signal Level too high	1238 mV
Address 50: Device's Signal Level too high	1262 mV

Date	Description
within last 24 hours	
2007-08-27 11:25:49	Address 51: Device's Signal Level too high
2007-08-27 11:25:49	Segment: Jitter Level too high
2007-08-27 11:25:49	Address 53: Device's Signal Level too high
2007-08-27 11:25:48	Segment: Segment Signal Level too high
2007-08-27 11:25:48	Address 50: Device's Signal Level too high
2007-08-27 11:15:10	Segment: DC Unbalance (Positive Pole)
2007-08-27 11:15:07	Segment: DC Unbalance (Positive Pole)
2007-08-27 11:14:36	Segment: DC Unbalance (Positive Pole)
2007-08-27 11:14:32	Segment: DC Unbalance (Positive Pole)
2007-08-27 11:14:20	Segment: DC Unbalance (Positive Pole)
2007-08-27 11:14:19	Segment: DC Unbalance (Positive Pole)
2007-08-27 11:13:05	Segment: DC Unbalance (Negative Pole)
2007-08-27 11:13:02	Segment: DC Unbalance (Negative Pole)
2007-08-27 11:12:56	Segment: DC Unbalance (Negative Pole)
2007-08-27 11:12:49	Segment: DC Unbalance (Negative Pole)
2007-08-27 11:12:31	Segment: DC Unbalance (Positive Pole)
2007-08-27 11:12:26	Segment: DC Unbalance (Positive Pole)
2007-08-27 11:12:19	Segment: DC Unbalance (Positive Pole)
2007-08-27 11:12:16	Segment: DC Unbalance (Positive Pole)
2007-08-27 10:42:45	Segment: Jitter Level too high
2007-08-27 10:42:45	Segment: Segment Signal Level too high
2007-08-27 10:42:44	Segment: Jitter Level too high
2007-08-27 10:42:44	Segment: Jitter Level too high
2007-08-27 10:42:38	Segment: Jitter Level too high
2007-08-27 10:42:37	Segment: Jitter Level too high
2007-08-27 10:42:36	Segment: Jitter Level too high
2007-08-27 10:42:30	Segment: Jitter Level too high

At the bottom of the interface, there are status indicators for "Connected" and "Device", and a taskbar showing the user as Administrator.

Przenośny zaawansowany zestaw diagnostyczny dla sieci PROFIBUS PA/Foundation Fieldbus

Diagnostyka segmentu - przykład

The screenshot displays the PACTware software interface for diagnosing a FieldConnex device. The window title is "PACTware - [DM-AM # Diagnostics]". The interface includes a menu bar (File, Edit, View, Project, Device, Extras, Window, Help), a toolbar, and a project tree on the left showing a "HOST PC" and a "FieldConnex Diagnostic Server # DM-AM #".

Device information is shown as follows:

- Device Name: DM-AM
- Device Tag:
- Fieldbus Type: PROFIBUS PA
- Segment Status: ⚠️

The main area is divided into two panels:

- Current Alarms:** A table listing active alarms.
- Alarm History:** A table listing historical alarms, filtered for the last 24 hours.

Current Alarms Table:

Description	Value
Segment	
⚠️ Jitter Level too high	8,0 µs
⚠️ Segment Signal Level too high	1263 mV
Nodes (Segment 1)	
⚠️ Address 51: Device's Signal Level too high	1188 mV
⚠️ Address 53: Device's Signal Level too high	1246 mV
⚠️ Address 50: Device's Signal Level too high	1262 mV

Alarm History Table (within last 24 hours):

Date	Description
2007-08-27 11:27:17	⚠️ Segment: Jitter Level too high
2007-08-27 11:27:16	⚠️ Segment: Jitter Level too high
2007-08-27 11:26:45	⚠️ Segment: Jitter Level too high
2007-08-27 11:26:45	⚠️ Segment: Jitter Level too high
2007-08-27 11:26:43	⚠️ Segment: Jitter Level too high
2007-08-27 11:26:43	⚠️ Segment: Jitter Level too high
2007-08-27 11:26:27	⚠️ Segment: Jitter Level too high
2007-08-27 11:26:27	⚠️ Segment: Jitter Level too high
2007-08-27 11:26:08	⚠️ Segment: Jitter Level too high
2007-08-27 11:26:07	⚠️ Segment: Jitter Level too high
2007-08-27 11:25:49	⚠️ Address 51: Device's Signal Level too high
2007-08-27 11:25:49	⚠️ Segment: Jitter Level too high
2007-08-27 11:25:49	⚠️ Address 53: Device's Signal Level too high
2007-08-27 11:25:48	⚠️ Segment: Segment Signal Level too high
2007-08-27 11:25:48	⚠️ Address 50: Device's Signal Level too high
2007-08-27 11:15:10	⚠️ Segment: DC Unbalance (Positive Pole)
2007-08-27 11:15:07	⚠️ Segment: DC Unbalance (Positive Pole)
2007-08-27 11:14:36	⚠️ Segment: DC Unbalance (Positive Pole)
2007-08-27 11:14:32	⚠️ Segment: DC Unbalance (Positive Pole)
2007-08-27 11:14:20	⚠️ Segment: DC Unbalance (Positive Pole)
2007-08-27 11:14:19	⚠️ Segment: DC Unbalance (Positive Pole)
2007-08-27 11:13:05	⚠️ Segment: DC Unbalance (Negative Pole)
2007-08-27 11:13:02	⚠️ Segment: DC Unbalance (Negative Pole)
2007-08-27 11:12:56	⚠️ Segment: DC Unbalance (Negative Pole)
2007-08-27 11:12:49	⚠️ Segment: DC Unbalance (Negative Pole)
2007-08-27 11:12:31	⚠️ Segment: DC Unbalance (Positive Pole)
2007-08-27 11:12:26	⚠️ Segment: DC Unbalance (Positive Pole)

The bottom panel contains diagnostic instructions for various fault types:

- Cable Fault:** Please verify that the correct and designated type of cable has been used in the segment installation. Especially the impedance value and the resistor value should be in focus here.
- Bus topology Fault:** Please verify that the total length of installed bus cable including the main line(trunk) and the drop lines(spurs) does not exceed the maximum and recommended allowed value in relation to the number of installed Field Devices.
- Device Error Fault:** The Jitter is determined by the maximum value that has been measured over all connected and communicating Devices. A single Device may have caused this problem. Check the Jitter Level for all devices.
- Configuration Fault:** The limit value to be supervised is wrongly configured and does not match to the current installation. Please verify the value and adjust it in accordance to the typical and rated Jitter.
- Multiple Segment Fault:**

The status bar at the bottom shows "Connected" and "Device" icons, along with the user name "Administrator" and the session name "<NONAME>".

Przenośny zaawansowany zestaw diagnostyczny dla sieci PROFIBUS PA/Foundation Fieldbus

Diagnostyka segmentu - przykład

The screenshot displays the PACTware software interface for diagnostics. The window title is "PACTware - [DM-AM # Diagnostics]". The menu bar includes File, Edit, View, Project, Device, Extras, Window, and Help. The toolbar contains various icons for file operations and device management.

Project: HOST PC
[*] <FDS>FieldConnex Diagnostic Server #
[*] DM-AM #

FieldConnex Device Information:
Device Name: DM-AM
Device Tag:
Fieldbus Type: PROFIBUS PA
Segment Status: ⚠

Current Alarms:

Description	Value
Segment DC-Voltage too low	0,5 V

Installation Fault:
The wrong Power Supply is currently in use. Please verify if the intended Power Supply Module is mounted to the Motherboard and check its maximum Output Voltage Level (e.g. 17V, 23V, 30V) imprinted on its Front Panel. Replace the Power Supply Module if the desired and correct one is not installed.

Configuration Fault:
There is a misconfiguration of the limit value to be supervised. Please re-configured the limit value in the "Fieldbus Physical Layer Data" within the Segment Monitor.

Malfunction Fault:
The Power Supply Module that is driving the Output Voltage Level is defective and needs a replacement.

Alarm History:
Filter On/Off | Filter Settings | Export...
Date | Description

Date	Description
within last 24 hours	
2007-08-27 11:59:03	Segment: Noise Level too high
2007-08-27 11:59:03	Segment: Noise Level too high
2007-08-27 11:59:03	Segment: Noise Level too high
2007-08-27 11:59:03	Segment: Noise Level too high
2007-08-27 11:59:02	Segment: Noise Level too high
2007-08-27 11:59:02	Segment: Noise Level too high
2007-08-27 11:59:02	Segment: Noise Level too high
2007-08-27 11:59:02	Segment: Noise Level too high
2007-08-27 11:59:01	Segment: Noise Level too high
2007-08-27 11:59:01	Segment: Noise Level too high
2007-08-27 11:59:01	Segment: Noise Level too high
2007-08-27 11:59:01	Segment: Noise Level too high
2007-08-27 11:59:01	Segment: Noise Level too high
2007-08-27 11:59:01	Segment: Noise Level too high
2007-08-27 11:59:00	Segment: Noise Level too high
2007-08-27 11:59:00	Segment: Noise Level too high
2007-08-27 11:59:00	Segment: Noise Level too high
2007-08-27 11:59:00	Segment: Noise Level too high
2007-08-27 11:58:58	Segment: Noise Level too high
2007-08-27 11:58:58	Segment: Noise Level too high
2007-08-27 11:58:58	Segment: Noise Level too high
2007-08-27 11:58:57	Segment: Noise Level too high
2007-08-27 11:58:57	Segment: Noise Level too high
2007-08-27 11:58:57	Segment: Noise Level too high
2007-08-27 11:58:57	Segment: Noise Level too high
2007-08-27 11:58:56	Segment: Noise Level too high
2007-08-27 11:58:56	Segment: Noise Level too high
2007-08-27 11:58:56	Segment: Noise Level too high
2007-08-27 11:58:56	Segment: Noise Level too high

System tray: Connected, Device, Administrator

Przenośny zaawansowany zestaw diagnostyczny dla sieci PROFIBUS PA/Foundation Fieldbus

Diagnostyka segmentu - przykład

The screenshot displays the PACTware software interface for diagnosing a FieldConnex segment. The window title is "PACTware - [DM-AM # Diagnostics]". The interface includes a menu bar (File, Edit, View, Project, Device, Extras, Window, Help) and a toolbar with various icons. On the left, a "Project" tree shows the hierarchy: HOST PC > [*] <FDS>FieldConnex Diagnostic Server # > [*] DM-AM #. The main area features the FieldConnex logo and the following details:

- Device Name: DM-AM
- Segment Status: ⚠️
- Device Tag:
- Fieldbus Type: PROFIBUS PA

Two main panels are visible:

- Current Alarms:** A table with columns "Description" and "Value". It shows one active alarm: "Segment DC-Voltage too low" with a value of "0 V".
- Alarm History:** A table with columns "Date" and "Description". It lists numerous historical alarms, including "Segment: Jitter Level too high", "Segment: Segment Signal Level too high", "Address 53: Device's Signal Level too high", "Address 52: Device's Signal Level too high", "Address 51: Device's Signal Level too high", "Address 50: Device's Signal Level too high", "Address 1: Device's Signal Level too high", "Segment: Segment DC-Voltage too low", and "Segment: Jitter Level too high".

Below the alarm panels, there are three sections of diagnostic text:

- Installation Fault:** The wrong Power Supply is currently in use. Please verify if the intended Power Supply Module is mounted to the Motherboard and check its maximum Output Voltage Level (e.g. 17V, 23V, 30V) imprinted on its Front Panel. Replace the Power Supply Module if the desired and correct one is not installed.
- Configuration Fault:** There is a misconfiguration of the limit value to be supervised. Please re-configured the limit value in the "Fieldbus Physical Layer Data" within the Segment Monitor.
- Malfunction Fault:** The Power Supply Module that is driving the Output Voltage Level is defective and needs a replacement.

The bottom status bar shows "Connected", "Device", and the user "Administrator".

Przenośny zaawansowany zestaw diagnostyczny dla sieci PROFIBUS PA/Foundation Fieldbus

Wartości mierzone - urządzenie

The screenshot displays the PACTware software interface for configuring a device. The window title is "PACTware - [DM-AM # Measured value]". The interface is divided into several sections:

- Project Tree (Left):** Shows a hierarchy starting with "HOST PC", followed by "<FDS>FieldConnex Diagnostic Server #", and then the device "DM-AM #".
- Device Information (Top Right):** Displays "Device Name: DM-AM", "Segment Status: [Warning Icon]", "Device Tag:", and "Fieldbus Type: PROFIBUS PA".
- Field Device Configuration (Right):** Contains fields for:
 - Field Device Tag: VEGAPULS
 - Field Device Address: 51
 - Field Device Status: Active, Alarm active, Data valid (all checked)
 - Signal Polarity: Standard
 - Noise: 29 mV
 - Jitter: 2,9 us
 - Number Live List Appearances: 1
 - Number of Pass Token misses: 0
- Field Device Signal Level Table (Bottom):** A table with columns: Label, Low Out ..., Low Main..., Actual ..., High Mai..., High Out..., Hyster..., and Reset. The row for "Signal Level [mV]" shows a value of 1200 mV, which is highlighted in yellow.

Label	Low Out ...	Low Main...	Actual ...	High Mai...	High Out...	Hyster...	Reset		
Signal Level [mV]	200	<input checked="" type="checkbox"/>	200	<input type="checkbox"/>	1209	1200	<input checked="" type="checkbox"/>	100	Reset

Przenośny zaawansowany zestaw diagnostyczny dla sieci PROFIBUS PA/Foundation Fieldbus

Wartości mierzone - segment

The screenshot displays the PACTware software interface for a FieldConnex diagnostic server. The main window shows the following information:

- Device Name:** DM-AM
- Segment Status:**
- Device Tag:**
- Fieldbus Type:** PROFIBUS PA
- Segment Tag:**
- Bus Communication Status:**
- Number of Field Devices detected:** 5

The **Fieldbus Physical Layer Data** table is as follows:

Label	Low Out ...	Low Main...	Actual ...	High Mai...	High Out...	Hyster...	Reset
Voltage [V]	9,0 <input type="checkbox"/>	9,0 <input type="checkbox"/>	12,7	32,0 <input type="checkbox"/>	32,0 <input type="checkbox"/>	1,0	Reset
Unbalance [%]	-84 <input checked="" type="checkbox"/>	-84 <input type="checkbox"/>	0	84 <input type="checkbox"/>	84 <input checked="" type="checkbox"/>	20	Reset
Min. Signal Level [mV]	200 <input checked="" type="checkbox"/>	200 <input type="checkbox"/>	612			100	Reset
Max. Signal Level [mV]			815	1200 <input type="checkbox"/>	1200 <input checked="" type="checkbox"/>	100	Reset
Noise [mV]			15	100 <input type="checkbox"/>	100 <input checked="" type="checkbox"/>	25	Reset
Jitter [us]			1,4	3,2 <input type="checkbox"/>	3,2 <input checked="" type="checkbox"/>	0,8	Reset

The interface also shows a tree view on the left with the following structure:

- HOST PC
 - [*] <FDS>FieldConnex Diagnostic Server #
 - [*] DM-AM #
 - DM-AM
 - Segment
 - Statistics
 - Field Devices
 - Master (1)
 - BARCON PA (50)
 - VEGAPULS (51)
 - APC-2000 (52)
 - ABB-2010T (53)
 - Unconfigured Field Devices

Przenośny zaawansowany zestaw diagnostyczny dla sieci PROFIBUS PA/Foundation Fieldbus

Monitorowanie całego segmentu

The screenshot displays the PACTware software interface for segment monitoring. The main window shows the following information:

- Device Name:** DM-AM
- Segment Status:** (Green checkmark)
- Device Tag:** (Empty field)
- Fieldbus Type:** PROFIBUS PA

Below this information, there are buttons for "Show Wizard", "Reset", and "Create Snapshot". A descriptive text states: "This window shows the actual segment data as well as the minimum and maximum values measured while this window is open. You can reset the min. and max. values using the Reset button. The min. and max. values are classified in the following way:"

Legend for status indicators:

- Value is Excellent
- Value is Good
- Value is Out of Specification

Segment Tag:

Segment Bus-Communication Status:

Segment Data

Label	Actual Value	Min. Value	Max. Value	Status	Information
Voltage [V]	12,7	12,7	12,7	<input checked="" type="checkbox"/>	Excellent
Unbalance [%]	0,0	0,0	0,0	<input checked="" type="checkbox"/>	Excellent
Noise [mV]	15,0	10,0	24,0	<input checked="" type="checkbox"/>	Excellent
Jitter [us]	1,4	0,5	1,4	<input checked="" type="checkbox"/>	Excellent
Min. Signal Level [mV]	610,0	610,0		<input checked="" type="checkbox"/>	Excellent
Max. Signal Level [mV]	814,0		817,0	<input checked="" type="checkbox"/>	Excellent

Field Device Data

Addr...	Field Device Tag	Signal [mV]	Noise [mV]	Jitter [us]	Polarity
1	Master	814,0	15,0	1,3	Standard
50	BARCON PA	741,0	15,0	1,2	Standard
51	VEGAPULS	711,0	15,0	1,4	Standard
52	APC-2000	610,0	15,0	0,9	Standard
53	ABB-2010T	711,0	15,0	0,6	Standard

The interface also includes a Project tree on the left showing the device hierarchy and a status bar at the bottom indicating "Connected" and "Device" status.

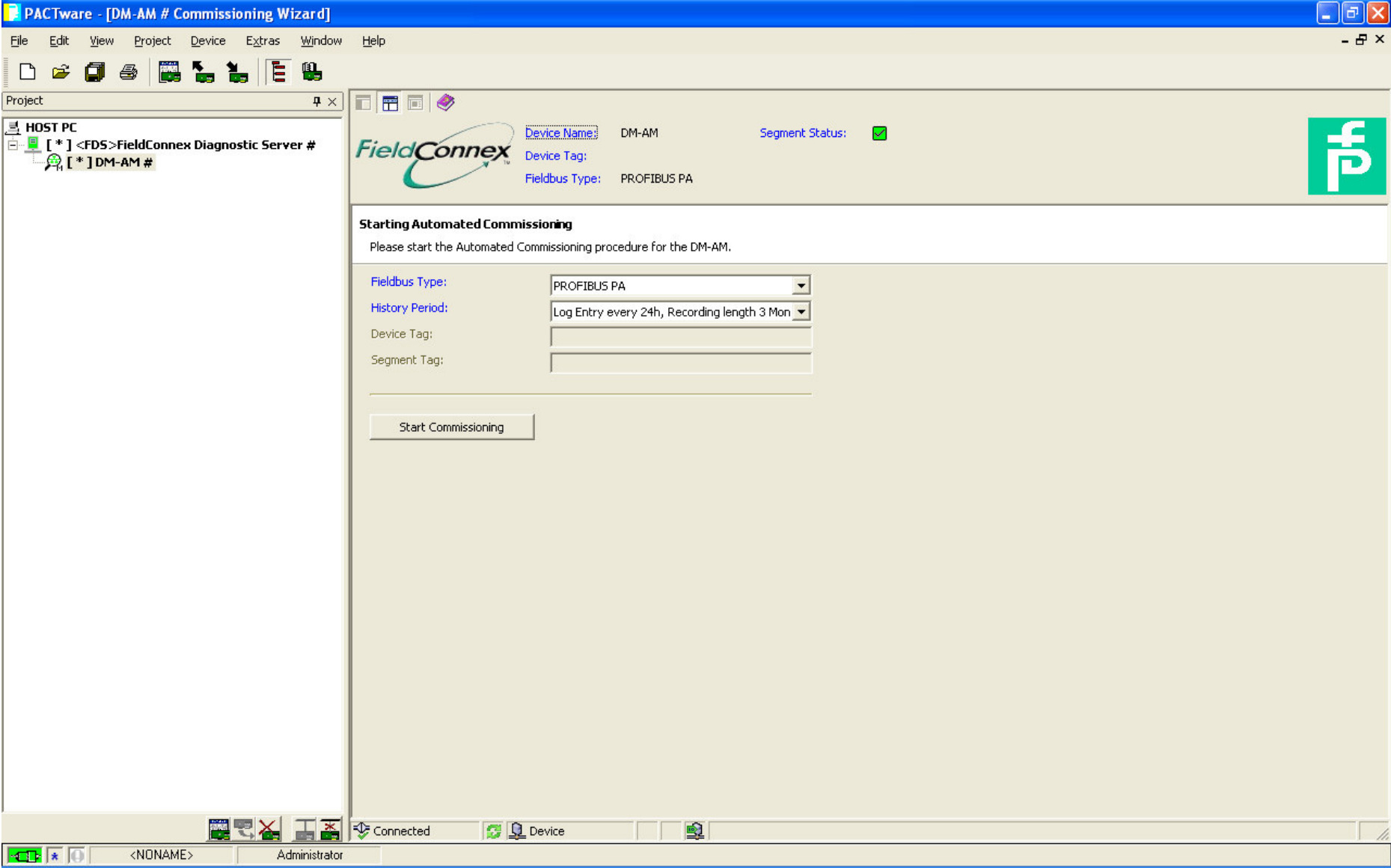
Przenośny zaawansowany zestaw diagnostyczny dla sieci PROFIBUS PA/Foundation Fieldbus

Wbudowany oscyloskop

The screenshot displays the PACTware Fieldbus Oscilloscope interface. The main window shows a yellow waveform on a black grid, representing a digital signal. The scale is set to $U = 100\text{mV/div}$ and $t = 50\mu\text{s/div}$. Below the main waveform is a zoomed-in view of a specific event, labeled "Request from Address: 1", with a red arrow pointing to the start of the event. The interface includes a menu bar (File, Edit, View, Project, Device, Extras, Window, Help), a toolbar, and a project tree on the left. The project tree shows a "HOST PC" containing a "FieldConnex Diagnostic Server #" and a "DM-AM #" device. The device information panel on the right shows: Device Name: DM-AM, Segment Status: , Device Tag: (empty), and Fieldbus Type: PROFIBUS PA. The "Start Recording" dialog box is open, showing recording parameters: Recording Length: 32,768 ms, Amplitude: +/- 0,625 V, Trigger Events: Request from Address, Response from Address, Missing Response from A, Pass Token to Address, Missing Pass Token Resp, CRC Error, Framing Error, Trigger Address: 1, Pretrigger Time: Automatic ms, Trigger Level: Ignore V, and Trigger Timeout: 240 s. The status bar at the bottom shows "Connected" and "Device" icons, along with a taskbar showing the user "Administrator".

Przenośny zaawansowany zestaw diagnostyczny dla sieci PROFIBUS PA/Foundation Fieldbus

Commisioning Wizard



Przenośny zaawansowany zestaw diagnostyczny dla sieci PROFIBUS PA/Foundation Fieldbus

Commisioning Wizard

Project

HOST PC

- [*] <FDS>FieldConnex Diagnostic Server #
- [*] DM-AM #

FieldConnex

Device Name: DM-AM Segment Status:

Device Tag: Device Tag:

Fieldbus Type: PROFIBUS PA

Setting Field Devices Tags- Step 1 of 6

Please enter the Tag Names of the listed Field Devices or let them read automatically via a supported Host Interface.

Segment Tag:

Host Interface:

Field Device Tags

Field Device...	Field Device Tag
1	Master
50	BARCON PA
51	VEGAPULS
52	APC-2000
53	ABB-2010T

Next > Cancel

Connected Device

<NONAME> Administrator

Przenośny zaawansowany zestaw diagnostyczny dla sieci PROFIBUS PA/Foundation Fieldbus

Commissioning Wizard

Project: HOST PC
[*] <FDS>FieldConnex Diagnostic Server #
[*] DM-AM #

FieldConnex

Device Name: DM-AM Segment Status:
Device Tag:
Fieldbus Type: PROFIBUS PA

Reviewing and controlling the Diagnostic Data - Step 2 of 6
Please verify the Diagnostic Data against abnormalities. Eliminate all problems first before you continue.

Segment Tag:
Segment Bus-Communication Status: ●

Segment Data

Label	Actual Value	Min. Value	Max. Value	Status	Information
Voltage [V]	12,7	12,7	12,7	<input checked="" type="checkbox"/>	Excellent
Unbalance [%]	0,0	0,0	0,0	<input checked="" type="checkbox"/>	Excellent
Noise [mV]	15,0	10,0	24,0	<input checked="" type="checkbox"/>	Excellent
Jitter [us]	1,3	0,6	1,3	<input checked="" type="checkbox"/>	Excellent
Min. Signal Level [mV]	613,0	610,0		<input checked="" type="checkbox"/>	Excellent
Max. Signal Level [mV]	814,0		817,0	<input checked="" type="checkbox"/>	Excellent

Field Device Data

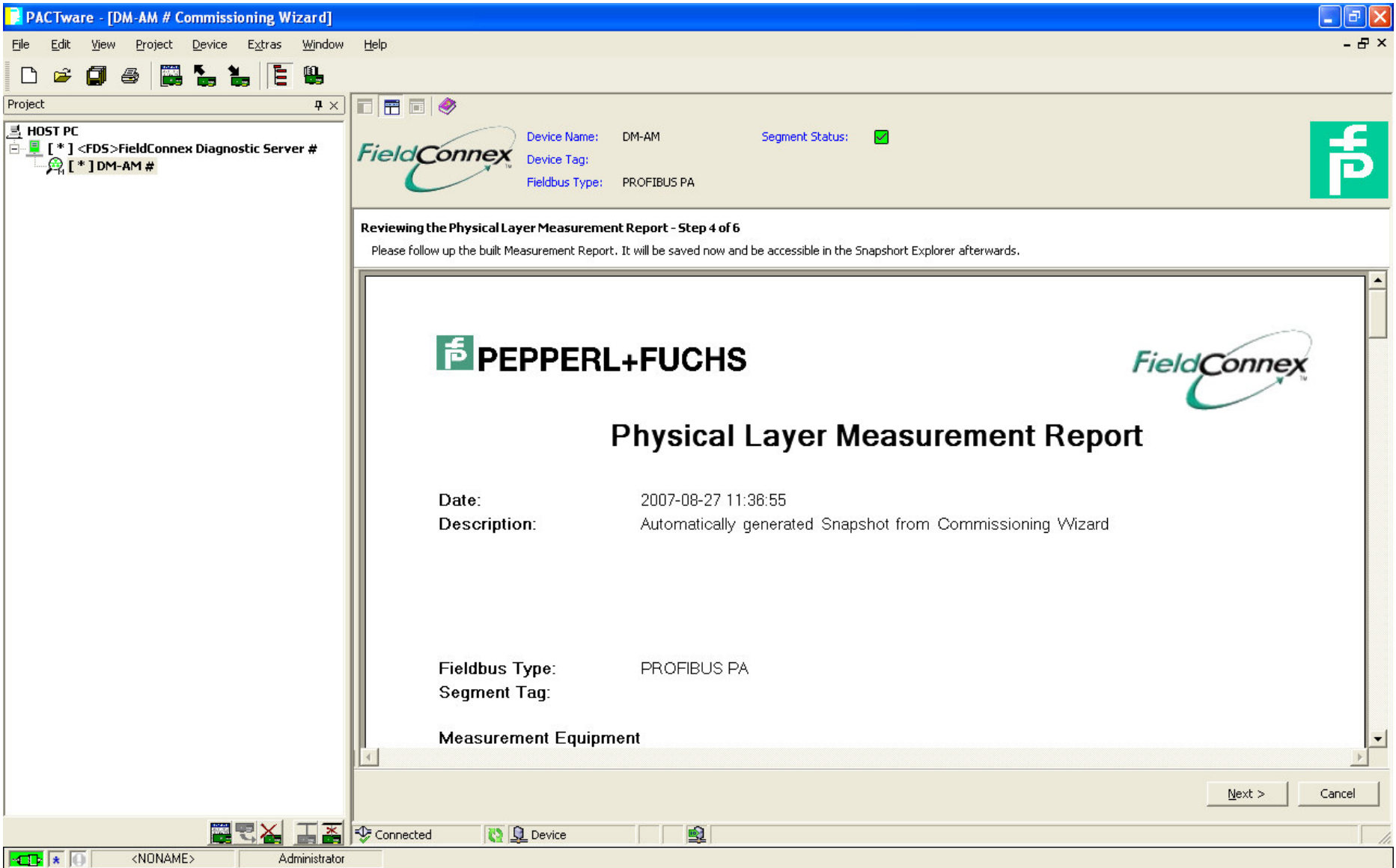
Add... /	Field Device Tag	Signal [mV]	Noise [mV]	Jitter [us]	Polarity
1	Master	814,0	15,0	1,3	Standard
50	BARCON PA	742,0	15,0	1,0	Standard
51	VEGAPULS	694,0	15,0	1,2	Standard
52	APC-2000	613,0	15,0	0,8	Standard
53	ABB-2010T	708,0	15,0	0,7	Standard

Connected Device

<NONAME> Administrator

Przenośny zaawansowany zestaw diagnostyczny dla sieci PROFIBUS PA/Foundation Fieldbus

Commissioning Wizard



Przenośny zaawansowany zestaw diagnostyczny dla sieci PROFIBUS PA/Foundation Fieldbus

Commissioning Wizard

Project

HOST PC

- <[*]>FieldConnex Diagnostic Server #
- <[*]>DM-AM #

FieldConnex

Device Name: DM-AM Segment Status:

Device Tag:

Fieldbus Type: PROFIBUS PA

pf

Setting the Advanced Diagnostic Module's configuration - Step 5 of 6

Please verify the calculated min. and max. limit values and modify them if necessary. Confirm to initiate the Diagnostic Module's configuration.

Segment Limit Values

Label	Low Out of...	Low...	Min.pea...	Max.pe...	High...	High Out of...	Hystere...
Voltage [V]	9,0	<input checked="" type="checkbox"/> 11,2	<input checked="" type="checkbox"/> 12,7	12,7	14,2	<input checked="" type="checkbox"/> 32,0	<input checked="" type="checkbox"/> 0,8
Unbalance [%]	-84	<input checked="" type="checkbox"/> -40	<input checked="" type="checkbox"/> 0	0	40	<input checked="" type="checkbox"/> 84	<input checked="" type="checkbox"/> 20
Min. Signal Level [mV]	200	<input checked="" type="checkbox"/> 509	<input checked="" type="checkbox"/> 609				50
Max. Signal Level [mV]				817	917	<input checked="" type="checkbox"/> 1200	<input checked="" type="checkbox"/> 50
Noise [mV]				24	64	<input checked="" type="checkbox"/> 100	<input checked="" type="checkbox"/> 25
Jitter [us]				1,4	2,4	<input checked="" type="checkbox"/> 3,2	<input checked="" type="checkbox"/> 0,5

Field Devices Signal Level Limit Values

Field...	Field Device Tag	Low Out of...	Low...	Min.pe...	Max.pe...	High...	High Out of...	Hystere...
1	Master	200	<input checked="" type="checkbox"/> 709	<input checked="" type="checkbox"/> 809	817	917	<input checked="" type="checkbox"/> 1200	<input checked="" type="checkbox"/> 50
50	BARCON PA	200	<input checked="" type="checkbox"/> 641	<input checked="" type="checkbox"/> 741	743	843	<input checked="" type="checkbox"/> 1200	<input checked="" type="checkbox"/> 50
51	VEGAPULS	200	<input checked="" type="checkbox"/> 592	<input checked="" type="checkbox"/> 692	711	811	<input checked="" type="checkbox"/> 1200	<input checked="" type="checkbox"/> 50
52	APC-2000	200	<input checked="" type="checkbox"/> 509	<input checked="" type="checkbox"/> 609	613	713	<input checked="" type="checkbox"/> 1200	<input checked="" type="checkbox"/> 50
53	ABB-2010T	200	<input checked="" type="checkbox"/> 608	<input checked="" type="checkbox"/> 708	713	813	<input checked="" type="checkbox"/> 1200	<input checked="" type="checkbox"/> 50

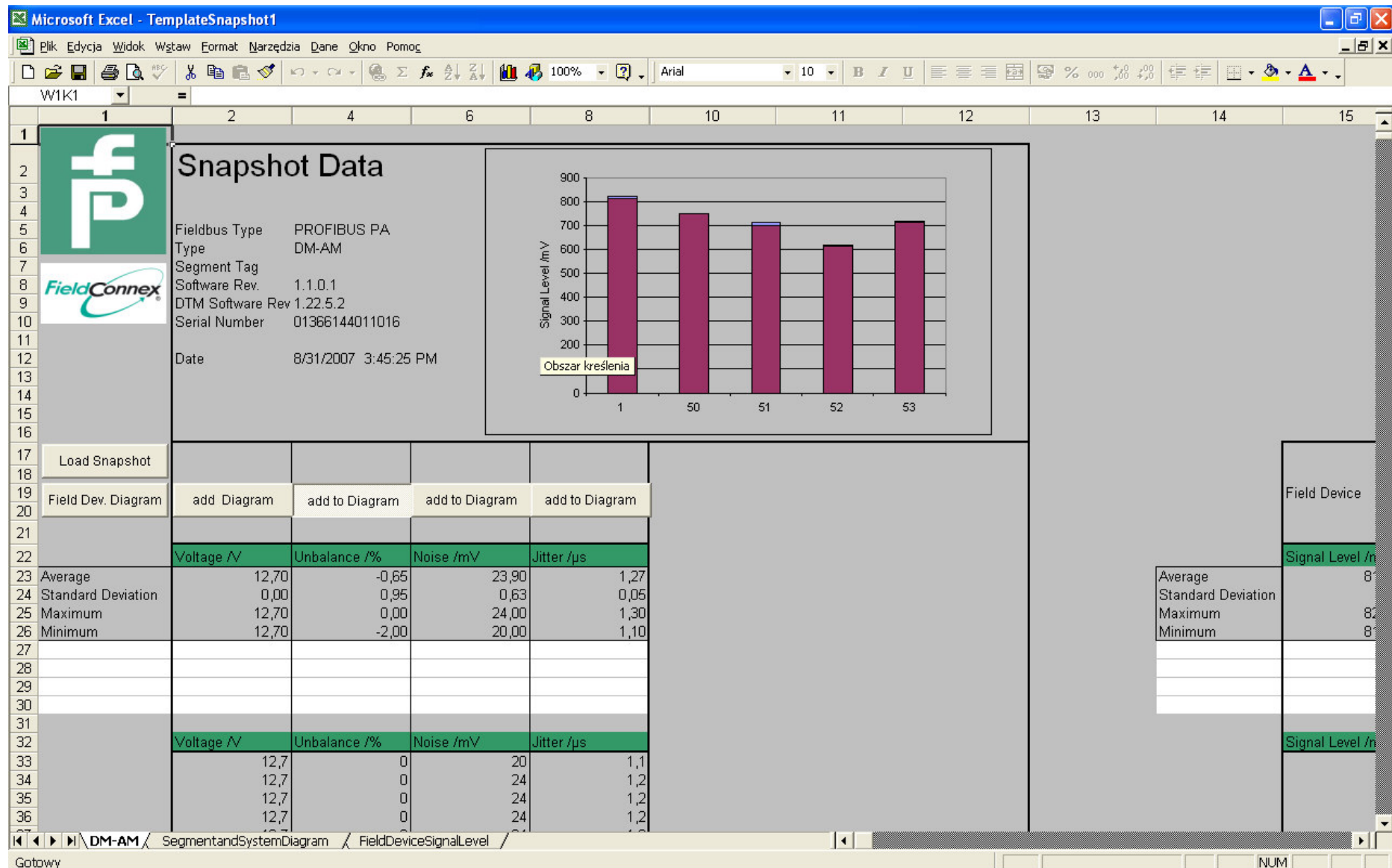
Next > Cancel

Connected Device

<NONAME> Administrator

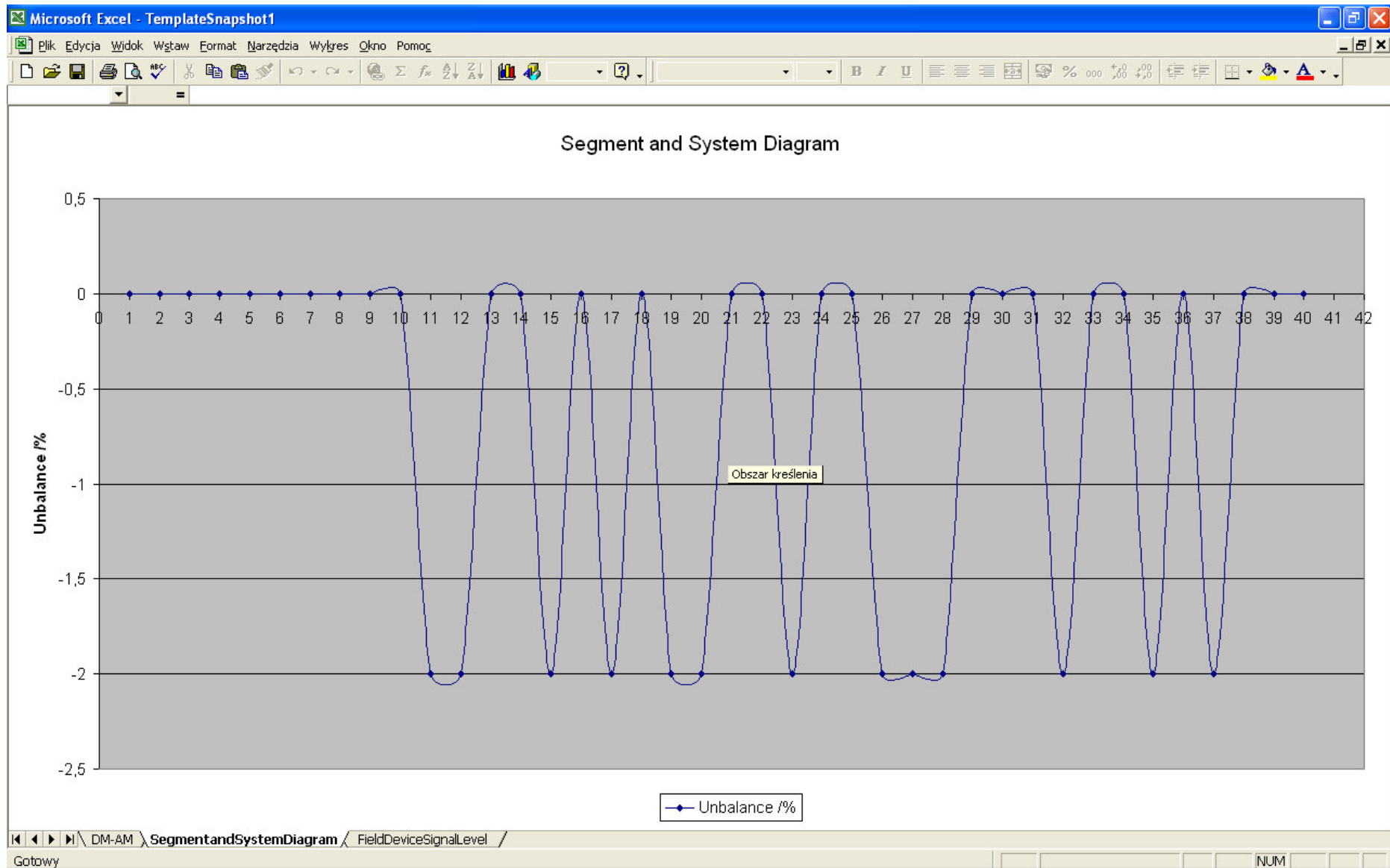
Przenośny zaawansowany zestaw diagnostyczny dla sieci PROFIBUS PA/Foundation Fieldbus

Analiza informacji diagnostycznych w MS Excel



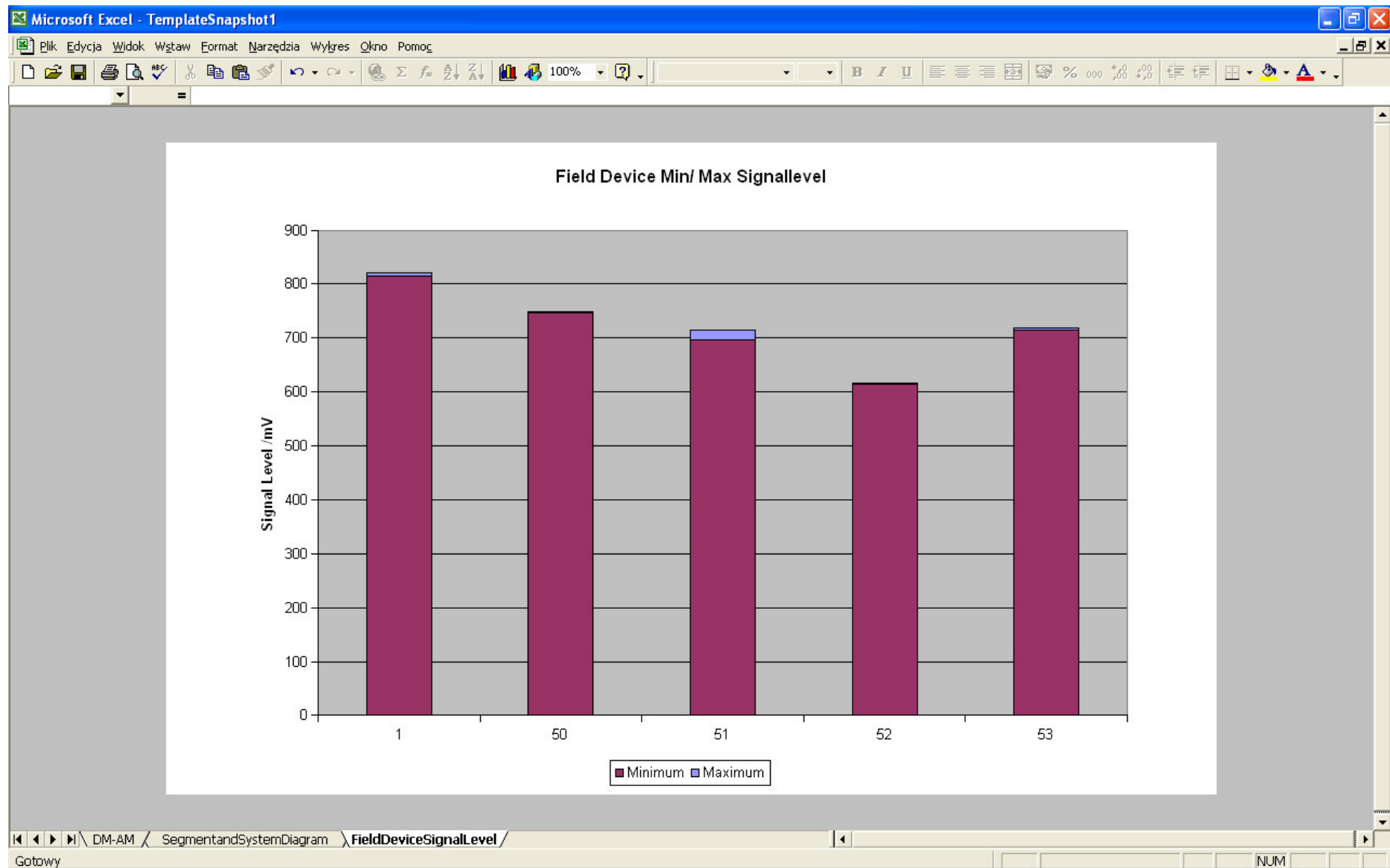
Przenośny zaawansowany zestaw diagnostyczny dla sieci PROFIBUS PA/Foundation Fieldbus

Analiza informacji diagnostycznych w MS Excel



Przenośny zaawansowany zestaw diagnostyczny dla sieci PROFIBUS PA/Foundation Fieldbus

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Przeñośny zaawansowany zestaw diagnostyczny dla sieci PROFIBUS PA/Foundation Fieldbus