DEWETRON

DEWE-30-16 / DEWE-30-32

TECHNICAL REFERENCE

EN ISO 14001

ISO 9001

Preface

Thank you!

Thank you very much for your investment in DEWETRON's unique data acquisition systems. These are top-quality instruments which are designed to provide you years of reliable service. This guide has been prepared to help you get the most from your investment, starting from the day you take it out of the box, and extending for years into the future.

This guide includes important startup notes, as well as safety notes and information about keeping your DEWETRON system in good working condition over time. However, this manual cannot and is not intended to replace adequate training.

This documentation contains operating as well as safety and care instructions that must be observed by the user. Faultless operation can only be guaranteed by observing these instructions.

Intended use

This product is used for measuring of different physical and/or electrical sizes (depending on model or configuration).

The connection depends on model or configuration and takes place via safety banana plugs, BNC connectors (± 50 V max.), D-SUB connectors (± 50 V max.), thermocouple connectors (± 50 V max.), BINDER® connectors (± 50 V max.), LEMO® connectors, SMB connetcors[1)] (± 50 V max.), µdot connectors[1)] (± 50 V max.) or RJ-45 connectors[1)].

1) DEWE-30-32 only.

Contents

Safety

Safety instructions

The following section contains warning and safety instructions that must be observed by the user. Faultless operation can only be guaranteed if these instructions are observed.

General safety instructions

- Use this system under the terms of the specifications only to avoid any possible danger. If the unit is used in a manner not specified by the manufacturer the protection can be impaired.
- Maintenance is to be executed by qualified staff only.
- DO NOT use the system if equipment covers or shields are removed. If you assume the system is damaged, have it examined by authorized personnel only.
- Any other use than described above may damage your system and is attended with dangers such as short-circuits, fire or electric shocks.
- The whole system must not be changed, rebuilt or opened (except for changing DAQ, DAQP or xPAD modules).
- Reinstall filler panels of unused DAQ, DAQP, PAD module slots to guarantee proper cooling of the installed modules. The warranty is void if the modules overheat due to missing filler panels.
- If you assume a more riskless use is not provided anymore, the system has to be rendered inoperative and should be protected against inadvertent operation. It is assumed that a more riskless operation is not possible anymore, if
  - the system is damaged obviously or causes strange noises.
  - the system does not work anymore.
  - the system has been exposed to long storage in adverse environmental.
  - the system has been exposed to heavy shipment strain.
- The warranty is void if damages caused by disregarding this manual. For consequential damages NO liability will be assumed.
- The warranty is void if damages to property or persons caused by improper use or disregarding the safety instructions.
- Unauthorized changing or rebuilding the system is prohibited due to safety and permission reasons (CE). Exception: changing DAQ, DAQP/PAD modules.
- Prevent using metal bare wires as there is a risk of short-circuit and fire hazard.
- DO NOT use the system before, during or shortly after a thunderstorm (risk of lightning and high energy overvoltage). An advanced range of application under certain conditions is allowed with therefore designed products only. For details refer to the specifications.
- Make sure that your hands, shoes, clothes and as well as the floor, the system or measuring leads, integrated circuits etc. are dry.
- Use measurement leads or measurement accessories aligned to the specification of the system only. Fire hazard in case of overload.
- Do not disassemble the system. There is a high risk of getting a perilous electric shock. Capacitors still might charged, even the system has been removed from the power supply.
- The measuring systems are not designed for use at humans and animals.
- Contact a professional if you have doubts about the method of operation, safety or the connection of the system.
- Handle the product with care. Shocks, hits and dropping it even from an already lower level may damage your system.
- Also consider the detailed technical reference manual as well as the security advices of the connected systems.

Electrical safety instructions

- With this product, only use the power cable delivered or defined for the host country.

- DO NOT connect or disconnect sensors, probes or test leads, as these parts are connected to a voltage supply unit.
- The system is grounded via a protective conductor in the power supply cord. To avoid electric shocks, the protective conductor has to be connected with the ground of the power network. Before connecting the input or output connectors of the system, make sure that there is a proper grounding to guarantee potential free usage. For countries, in which there is no proper grounding, refer to your local legally safety regulations for safety use.
- DC systems: Every DC system has a grounding connected to the chassis (black safety banana plug).
- Note the characteristics and indicators on the system to avoid fire or electric shocks. Before connecting the system, carefully read and understand the corresponding specifications in the product manual.
- The inputs are not, unless otherwise noted (CATx identification), for connecting to the main circuits of category II, III and IV. The measurement category can be adjusted depending on module configuration.
- The power cord or the main power switch separates the system from the power supply. Do not block the power cord or main switch, since it has to be accessible for the users.
- Any direct voltage output is protected with a fuse against short-circuits and reverse-polarity, but is NOT galvanically isolated (except it is explicit marked on the system).
- Supply overvoltage category is II.
- The system must be connected and operated to an earthed wall socket at the AC mains power supply only (except for DC systems).
- DO NOT touch any exposed connectors or components if they are live wired. The use of metal bare wires is not allowed. There is a risk of short-circuits and fire hazard.
- The assembly of the system is equivalent to protection class I. For power supply, only the correct power socket of the public power supply must be used, except the system is DC powered.
- Be careful with voltages >25 VAC or >35 VDC. These voltages are already high enough in order to get a perilous electric shock by touching the wiring.
- Unless otherwise stated, the maximum input voltage for measuring cards is 70 V_{DC} and 46.7 V_{PEAK}
- The electrical installations and equipments in industrial facilities must be observed by the security regulations and insurance institutions.

Ambient safety notices

- This product is intended for use in industrial locations. As a result, this product may cause interference if used in residential areas. Such use must be avoided unless the user takes special measures to reduce electromagnetic emissions to prevent interferences to the reception of radio and television broadcasts.
- Do not switch on the system after transporting it from a cold into a warm room and vice versa. The thereby created condensation may damage your system. Acclimatise the system unpowered to room temperature.
- Any use in wet rooms, outdoors or in adverse environmental condition is not allowed. Adverse environmental conditions are:
  - Moisture or high humidity
  - Dust, flammable gases, fumes or dissolver
  - Thunderstorm or thunderstorm conditions (except assembly PNA)
  - Electrostatic fields etc.
- DO NOT use the system in rooms with flammable gases, fumes or dust or in adverse environmental conditions.
- Direct exposure of any DEWETRON product to strong sunlight or other heat radiation shall be prevented, as this could excessively heat up the product and lead to permanent damage of the product.
- The use of the measuring system in schools and other training facilities must be observed by skilled personnel.

Safety notices during operation

- During the use of the system, it might be possible to access another parts of a more comprehensive system. Read and follow the safety instructions provided in the manuals of all other components regarding warning and security advices for using the system.
- The product heats during operation. Make sure there is adequate ventilation. Ventilation slots must not covered. Only fuses of the specified type and nominal current may be used. The use of patched fuses is prohibited.

Standards and norms

This product has left the factory in safety-related flawless and proper condition. In order to maintain this condition and guarantee safety use, the user has to consider the security advices and warnings in this manual.

EN 61326-3-1:2008

IEC 61326-1 applies to this part of IEC 61326 but is limited to systems and equipment for industrial applications intended to perform safety functions as defined in IEC 61508 with SIL 1-3.

The electromagnetic environments encompassed by this product family standard are industrial, both indoor and outdoor, as described for industrial locations in IEC 61000-6-2 or defined in 3.7 of IEC 61326-1.

Equipment and systems intended for use in other electromagnetic environments, for example, in the process industry or in environments with potentially explosive atmospheres, are excluded from the scope of this product family standard, IEC 61326-3-1.

Devices and systems according to IEC 61508 or IEC 61511 which are considered as “operationally welltried”, are excluded from the scope of IEC 61326-3-1.

Fire-alarm and safety-alarm systems, intended for protection of buildings, are excluded from the scope of IEC 61326-3-1.

Typographic conventions

Safety and warning notices

WARNING

Indicates a hazardous situation that, if not avoided, could result in death or serious injury.

CAUTION

Indicates a hazardous situation that, if not avoided, could result in minor or moderate injury.

Notices

NOTICE

This text indicates situations or operation errors which could result in property damage or data loss.

INFORMATION

This text indicates important information or operating instructions. Not observing these instructions could inhibit or impede you from successfully completing the tasks described in this documentation.

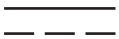
Symbols

Denotes a warning that alerts you to take precautions to avoid injury. When this symbol is shown on the product, refer to the technical reference manual (ISO 7000-4034; 2004-01).

Indicates hazardous voltages.

Observe precautions for handling electrostatic sensitive devices.

Indicates the chassis terminal (IEC 60417-5020; 2002-10).



Direct current (IEC 60417-5031; 2002-10)

Alternate current (IEC 60417-5032; 2002-10)

Both direct and alternating current (IEC 60417-5033; 2002-10)

Three-phase alternating current (IEC 60417-5032-1; 2002-10)

Protective conductor terminal (IEC 60417-5019; 2006-08)

Equipment protected throughout by double insulation or reinforced insulation (IEC 60417-5172; 2003-02)

On (power) (IEC 60417-5007; 2002-10)

Off (power) (IEC 60417-5008; 2002-10)

General information

Environmental considerations

The following information refers to the environmental impact of the product and the product end-of-life handling. Observe the following guidelines when recycling a DEWETRON system:

- System and components recycling

The production of these components has required the extraction and use of natural resources. The substances contained in the system could be harmful to your health and to the environment if the system is improperly handled at its end of life. Recycle this product in an appropriate way to avoid an unnecessary pollution of the environment and to keep natural resources.

This symbol indicates that this system complies with the European Union's requirements according to Directive 2002/96/EC on Waste of Electrical and Electronic Equipment (WEEE). Further information about recycling can be found on the DEWETRON website (www.dewetron.com).

- Restriction of hazardous substances

  This product has been classified as Monitoring and Control equipment, and is outside the scope of the 2011/65/EU RoHS Directive. This product is known to contain lead.

Problematic network stacks

Often intrusive IT software or network processes can interfere with the primary function of the DEWETRON system: to record data. Therefore we recommend strongly against the installation of IT/MIS software and running their processes on any DEWETRON data acquisition system, and cannot guarantee the performance of our systems if they are so configured.

Warranty information

A copy of the specific warranty terms applicable to your DEWETRON product and replacement parts can be obtained from your local sales and service office.

Legal information

Restricted rights legend

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DEWETRON GmbH
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8074 Grambach
Austria

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Printing history

Refer to the page bottom for printing version.

Main system

Key facts

- Rugged industrial design
- Signal conditioning with system isolation
- 16 or 32 slots for DAQP modules
- Default slot for TRION-1802/1600-dLV board

System specifications

DEWE-30 series		
Signal input		According to installed DAQP modules
DEWE-30-32	Analog signal output – Option 30-32-OUT-5 – Option 30-32-OUT-10[1)] – Option 30-SPEC	1x D-SUB-37 sockets – 32 BNC sockets with up to ±5 V output – 32 BNC sockets with up to ±10 V output, limited bandwidth 300 kHz – Multipin output connector for any other A/D cards
	Analog output configuration	Single ended
	Power supply	100 to 250 V_{AC} (breakdown voltage @ 2500 V); 45 W available for modules[2)] in slots 0..15 and 45 W available for modules[2)] in slots 16..31
DEWE-30-16	Analog signal output – Option 30-16-OUT-5 – Option 30-16-OUT-10 – Option 30-SPEC	1x D-SUB-37 sockets – 16 BNC sockets with up to ±5 V output – 16 BNC sockets with up to ±10 V output, limited bandwidth 300 kHz – Multipin output connector for any other A/D cards
	Analog output configuration	Single ended
	Power supply	100 to 250 V_{AC} (breakdown voltage @ 2500 V); 45 W available for modules[2)]
Interfaces		RS-232 and RS-485 – For configuring DAQP modules
Weight		DEWE-30-16: Typ. 4.5 kg (9 lbs.), depending on configuration DEWE-30-32: Typ. 7 kg (15 lbs), depending on configuration
Dimensions (W x D x H) – Option 30-16-MK – Option 30-32-MK		DEWE-30-16: approx. 438.5 x 253 x 133 mm (17.3 x 10 x 5.2 in.) DEWE-30-32: approx. 438.5 x 253 x 225 mm (17.3 x 10 x 8.9 in.) – 19” 3U: 483 x 256 x 133 (19 x 10.1 x 5.2 in.) – 19“ 5U: 482 x 281 x 225 (19 x 11.1 x 8.9 in.)
Environmental specifications		
Operating temperature		0 °C to 60 °C[3)]
Storage temperature		-20 to +70 °C
Humidity (operating)		10 to 85 %, non condensing
Humidity (storing)		5 to 95 %, rel. humidity
Random vibration test; EN 60721-3-2; Class 2M2		
Frequency range		10–200 Hz
Spectral acceleration density		1 m/s²/ Hz from 10–200 Hz
Duration		30 min./axis

Tab. 1: System specifications DEWE-30 series

DEWE-30 series	
Shocktests; EN 60068-2-27	
Pulse form	Half-sine
Acceleration amplitude	15 g
Duration	11 ms
Direction	3 bumps each direction, 6 directions in total

Tab. 1: System specifications DEWE-30 series

1) Accuracy: ±0.07 % of reading ±0.6 mV (for ±10 V output this equals: ±0.07 % of reading ±0.006 %).

INFORMATION Total accuracy DAQx modules and DEWE-30-x: √((Accuracy DAQx module)^2 + (Accuracy DEWE-30-x)^2)

2) Check the appropriate modules manual for power consumption of each installed module and calculate the total power consumption.

3) Derating 0.9 W/°C above 40 °C for AC power supply

Dimensions*

DEWE-30-32

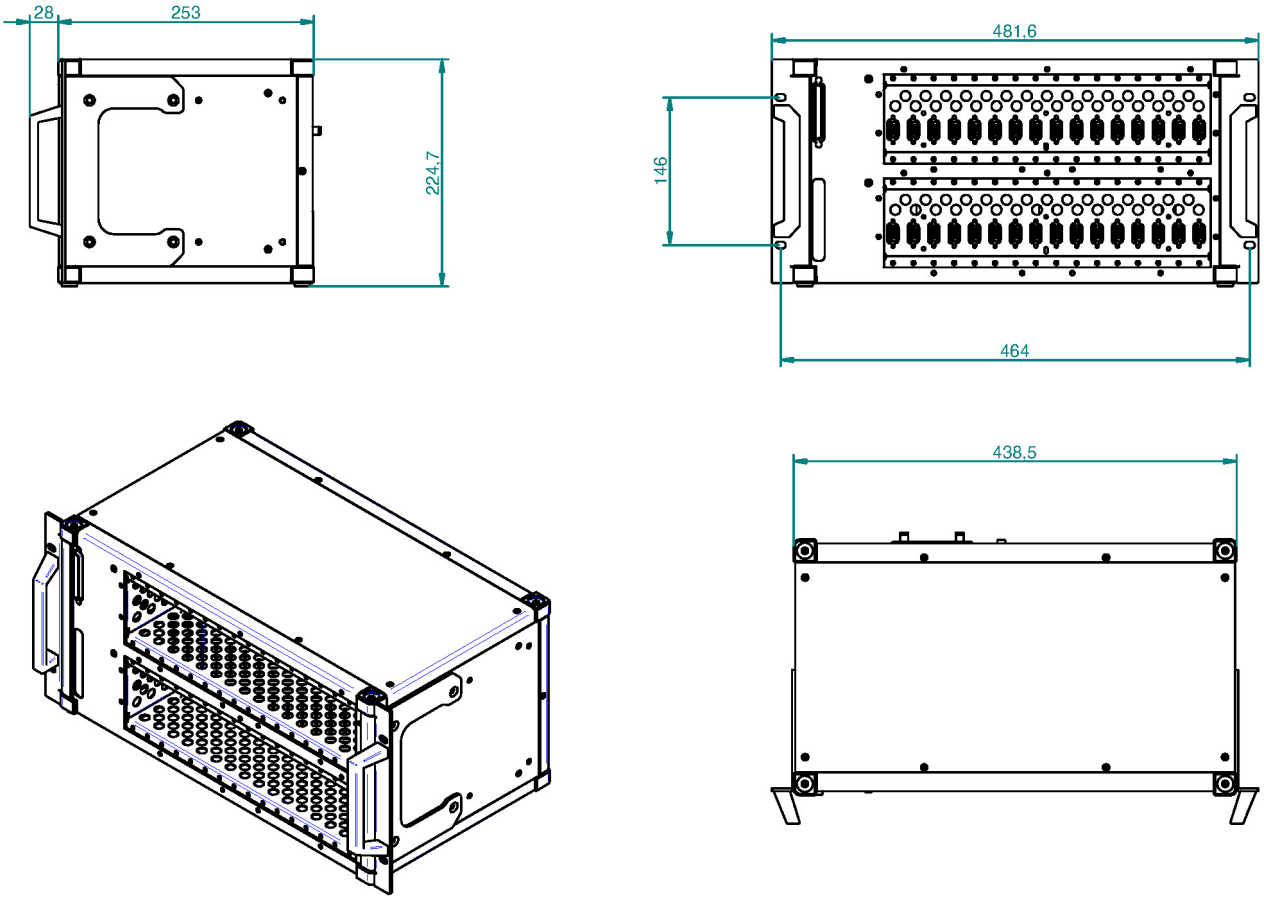


Fig. 1: Dimensions DEWE-30-32

DEWE-30-16

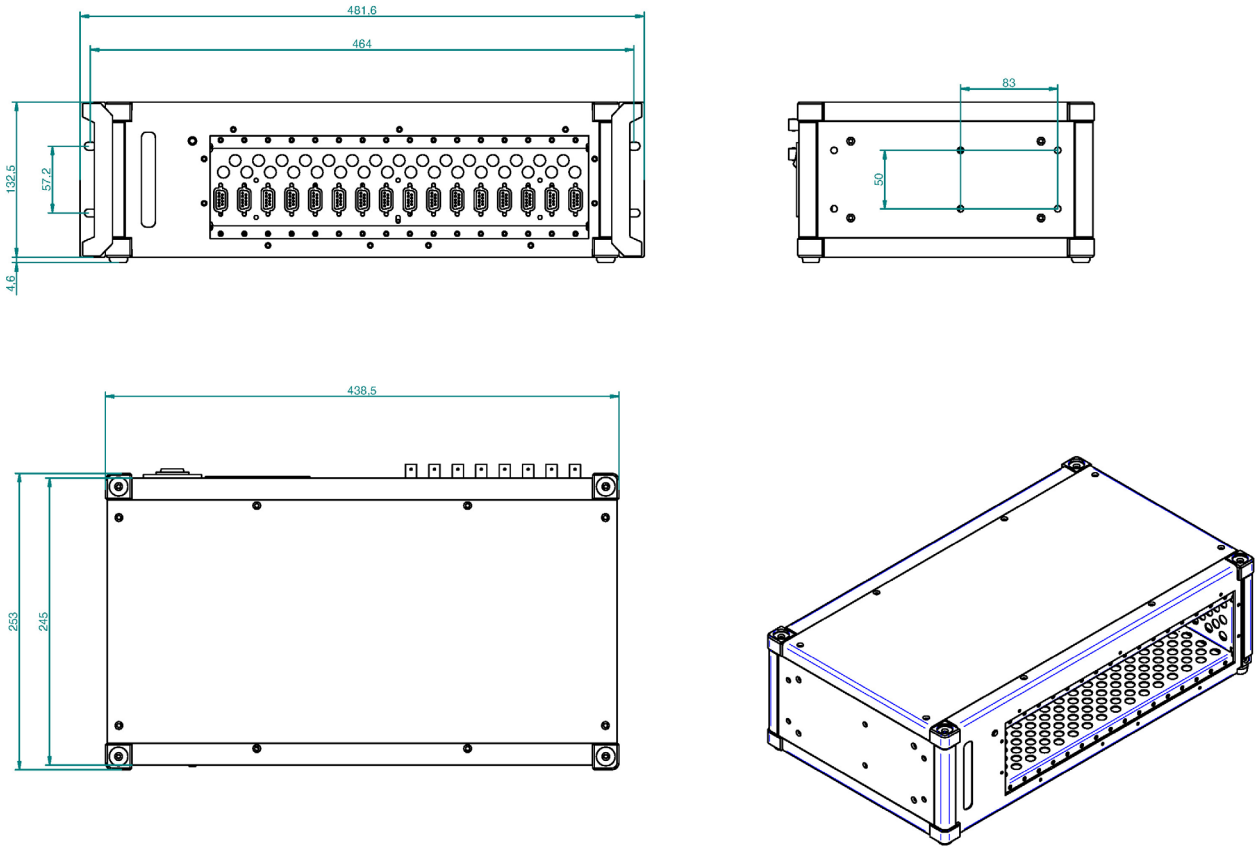


Fig. 2: Dimensions DEWE-30-16

*) Dimensions in mm (1 inch = 25.4 mm)

Connections and ports

INFORMATION

The location of the connectors might vary from system to system and depends on the actural configuration.

DEWE-30-32

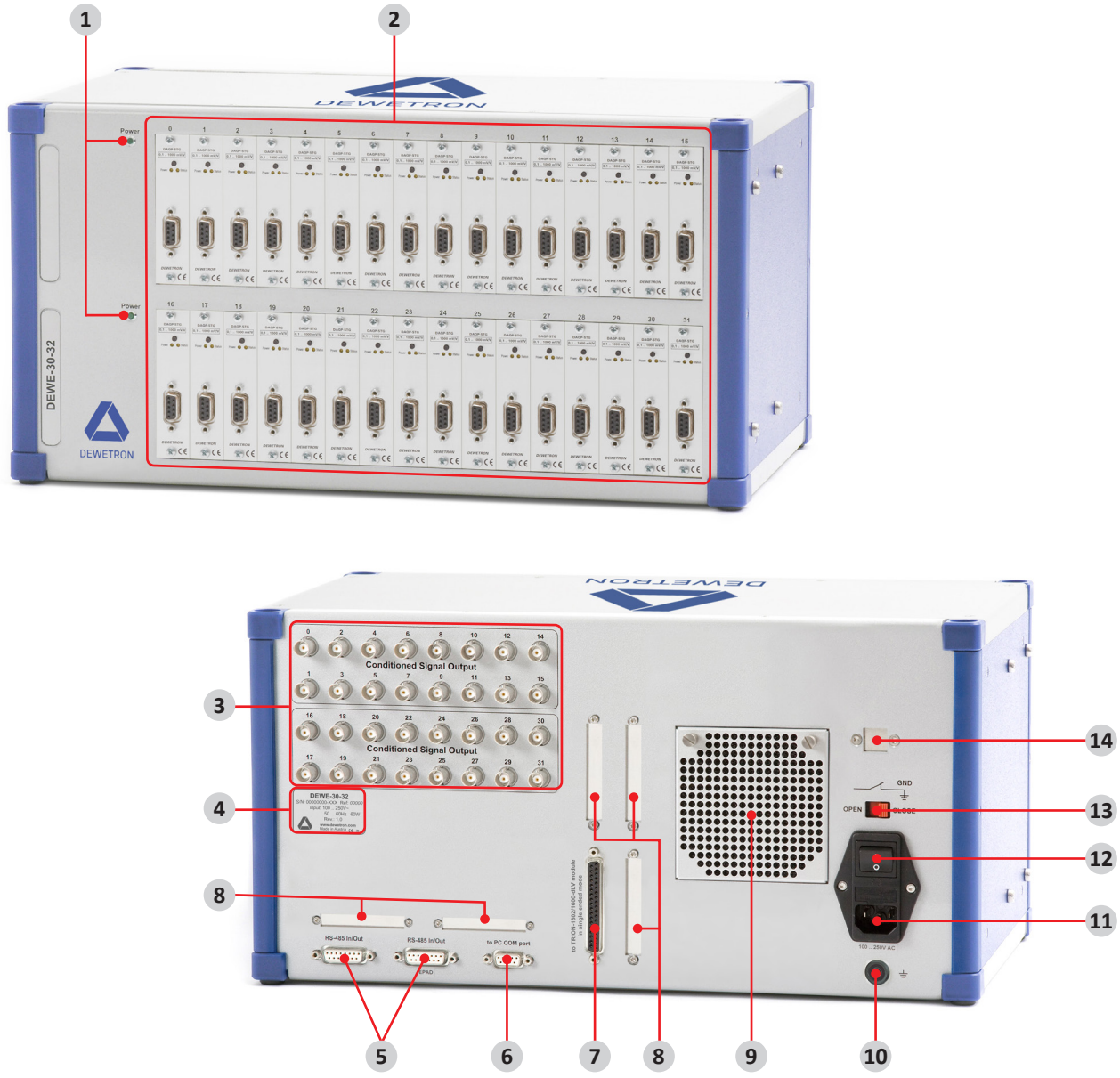


Fig. 3: DEWE-30-32 connections and ports

DEWE-30-16

Fig. 4: DEWE-30-16 connections and ports

1. Power status LED
2. DAQP series module slots
3. Conditioned signal output (30-OUT-x-AMP) (optional)
4. Nameplate
5. RS-485 I/O (EPAD) connector
6. RS-232 interface connector (COM 1)
7. D-SUB-37 socket for connection to TRION-1802/1600-dLV board
8. D-SUB-37 socket for connection to channels 17 .. 32 from expansion unit
9. Inlet air
10. Ground connector
11. Power supply input connector
12. Power-on switch
13. Ground switch
14. Lantronix Ethernet connector (optional)

Power supply

Power supply input connector

This connector supports standard 100 .. 250 V_{AC} power supply input for your system.

Power-on switch

The power-on switch has to be used to switch on the system.

Power status LED

The power status LED is located on the front side of the device and indicates if the device is switched on/off.

DAQP series module slots

The device is equipped with 16 (DEWE-30-16) or 32 (DEWE-30-32) slots for DAQP series modules.

Conditioned signal output (30-OUT-x-AMP)

The conditioned signal output of each DAQP series module is also available on a BNC socket on the rear panel of the DEWE-30-xx as a ±5 V or ±10 V signal. This requires one of the following options:

- 30-OUT-5-AMP: 16 BNC connectors on back panel, ±5 V separately buffered output of conditioned signals
- 30-OUT-10-AMP: 16 BNC connectors on back panel, ±10 V separately buffered output of conditioned signals

RS-485 I/O (EPAD) connector

The RS-485 I/O interface connecotor (female) allows to connect DEWETRON EPAD modules to the system. All unassigned pins in *Fig. 5* are not connected. It is also possible to connect multiple DEWE-30-xx system with each other via the RS-485 I/O connector.

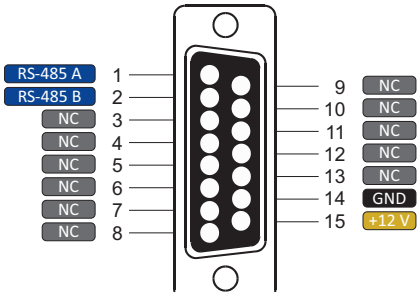


Fig. 5: Pin assignment RS-485 I/O interface connector (EPAD)

D-SUB-37 socket for connection to TRION-1802/1600-dLV board

This connector provides 16 channel balanced differential outputs. For further information see Connection to a TRION(3)-1802/1600-dLV-32 module on page 33.

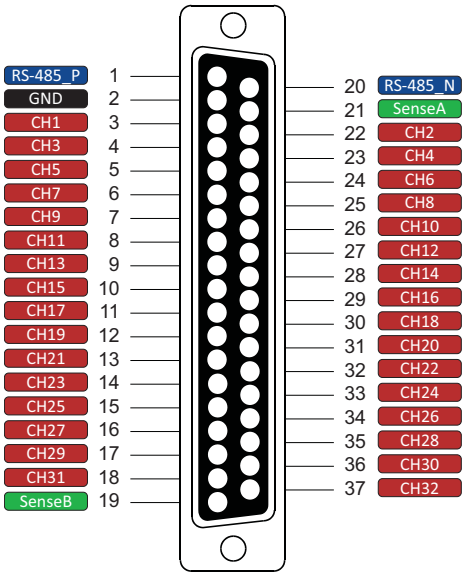


Fig. 6: Pin assignment D-SUB-37 connector for connection to TRION-1802/1600-dLV board

D-SUB-37 socket for connection to channels 17 .. 32 from expansion unit

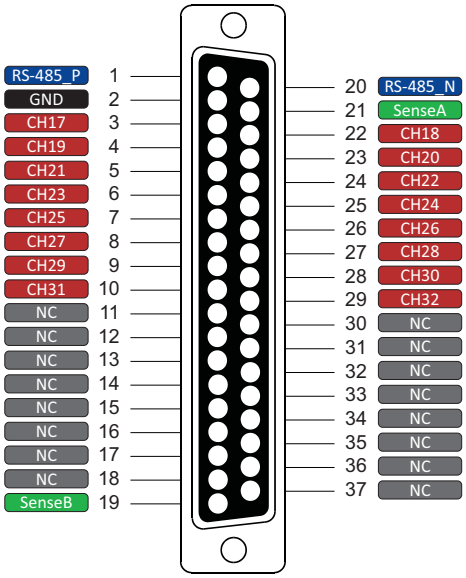


Fig. 7: Pin assignment D-SUB-37 connector for connection to channels 17 .. 32 from expansion unit

RS-232 interface connector (COM 1)

The RS-232 interface connector (female) is configured as standard RS-232 interface COM 1 and can be used for peripheral units. All unassigned pins in *Fig. 8* are not connected.

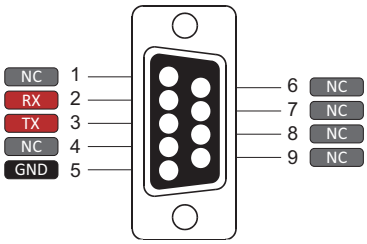


Fig. 8: Pin assignment RS-232 interface connector (COM1)

Ground connector

For some kind of measurements, it is necessary to give the system an additional ground connection.

Nameplate

The nameplate is located on the backside of the device. It indicates the product name and serial number as well as information about the power properties and manufacturer.

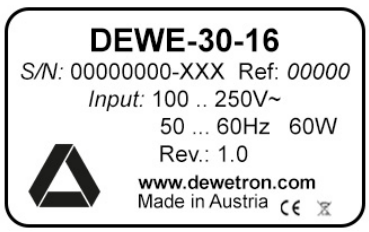


Fig. 9: Nameplate

Options

Lantronix Ethernet connector

With the Lantronix Ethernet option the instrument is equipped with an additional LAN-to-RS-485 interface. The MAC address of the Lantronix module is located on a sticker on the DEWE-30-xx device.

For installation steps see chapter Setup of Lantronix Ethernet connector on page 28.

30-OUT-DB37-5-AMP / 30-OUT-DB37-10-AMP

Optionally, the DEWE-30-xx can be equipped with a D-SUB-37 connector on back panel for ±5 V or ±10 V, respectively, separately buffered output of conditioned signals.

Specifications	30-OUT-DB37-5-AMP	30-OUT-DB37-10-AMP
Channels	16	
Input voltage	±5 V	±10 V
Output voltage	±5 V	±10 V
Filter	n.a.	
Offset accuracy	typically ±200 µV; max. ±600 µV	
Gain error	none	0.07 % of reading
Slew rate	40 V/µs (at 1 kΩ//1nF load)	
Max. cable length / bandwidth – 100 m (10 nF capacitive load) – 50 m – 100 m	 up to 500 kHz 300 kHz bandwidth 100 kHz bandwidth	
Protection	Short circuit protection for each channel; Shor did not effect the input or other channels.	

Tab. 2: Specifications 30-OUT-DB37-x-AMP

Configuration examples

DEWE-30-16

Standard DEWE-30-16 configuration

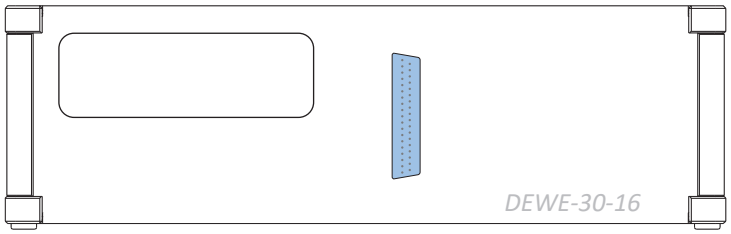


Fig. 10: Standard DEWE-30-16 configuration

DEWE-30-16 with DEWE-30-OUT-5 option

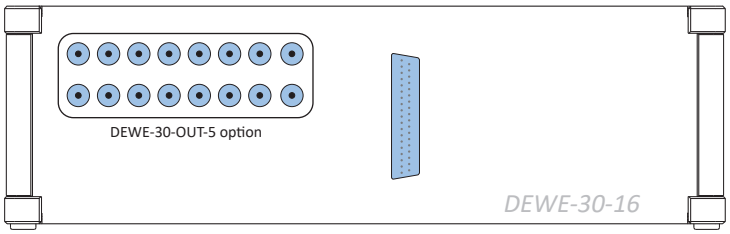


Fig. 11: DEWE-30-16 with DEWE-30-OUT-5 option

DEWE-30-16 with DEWE-30-OUT-10 option

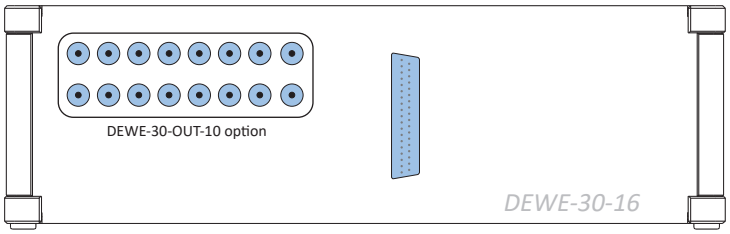


Fig. 12: DEWE-30-16 with DEWE-30-OUT-10 option

DEWE-30-32

Standard DEWE-30-32 configuration

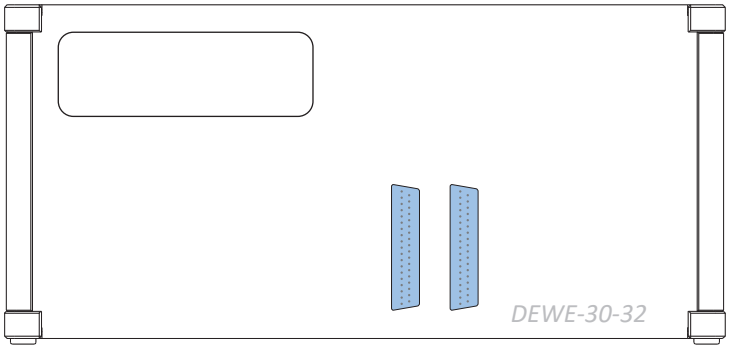


Fig. 13: Standard DEWE-30-32 configuration

DEWE-30-32 with DEWE-30-OUT-5 option

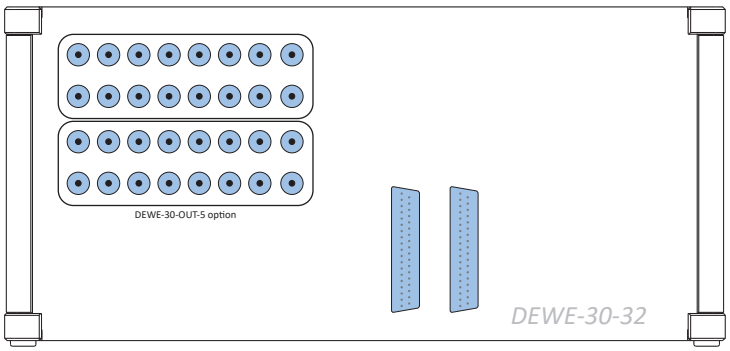


Fig. 14: DEWE-30-32 with DEWE-30-OUT-5 option

DEWE-30-32 with DEWE-30-OUT-10 option

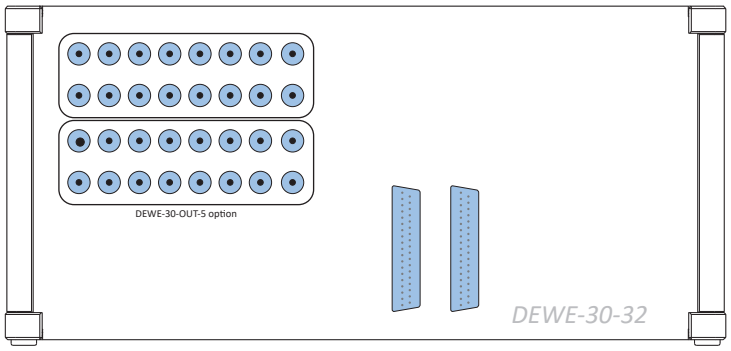


Fig. 15: DEWE-30-32 with DEWE-30-OUT-10 option

Working with the system

Further information on how to operate with OXYGEN find in the corresponding user manual available at: https://ccc.dewetron.com/pl/oxygen

For a more detailed explanation of the OXYGEN software refer to the OXYGEN Technical Reference Manual, which is available at *https://ccc.dewetron.com/pl/oxygen*.

Software

Using DAQP modules with OXYGEN

Connecting DAQP modules via a TRION-1802/1600-dLV board

1. Go to the DAQ Hardware setup in the System Settings and make sure that the DAQP Series and the TRION Series are enabled (see Fig. 67). Changes take effect on application restart.

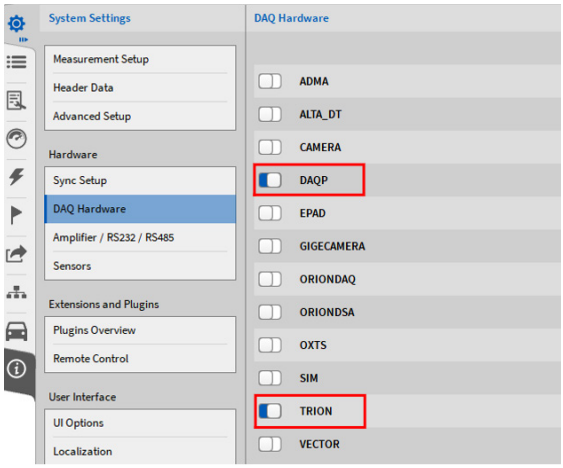


Fig. 16: Enabling DAQP and TRION hardware in the DAQ Hardware setup

2. Make sure that the driver for the TRION-hardware is installed. The installer is named DEWETRON-TRION-Applications-x64.exe and can be found in the folder *\files\drivers\2_daqboards\dewetron\trion_driver\DEWETRON TRION Rx.x* of the Install Media USB stick which is delivered with the measurement system.
3. If the driver was installed correctly, the DEWETRON Explorer will be available in the Windows start menu.

The DAQP are now connected to a TRION-1802/1600-dLV board.

Programming the modules addresses

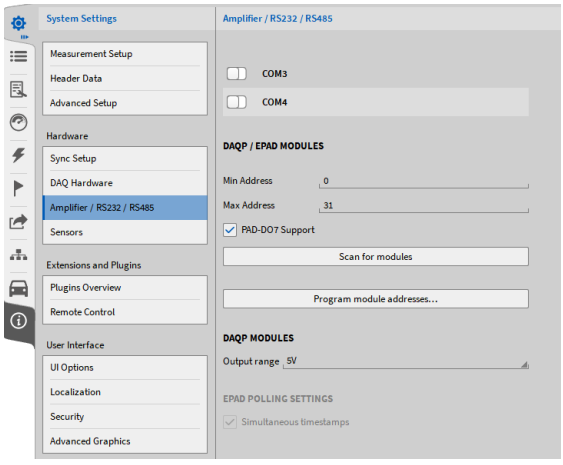


Fig. 17: Programming module addresses

1. Enable the Serial Port(s) on which the modules are connected (see ① in Fig. 68).
2. Select the proper output range of the module in the Advanced Setup (see Advanced settings).
3. Click on Program module addresses (see ② in Fig. 68).
4. Module programming UI

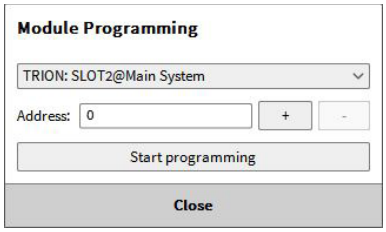


Fig. 18: Module programming UI

5. Select the proper Serial Port and click on Start programming (see Fig. 69). If the modules are connected to several serial ports, the Programming must be repeated for each serial port. The following window will appear:

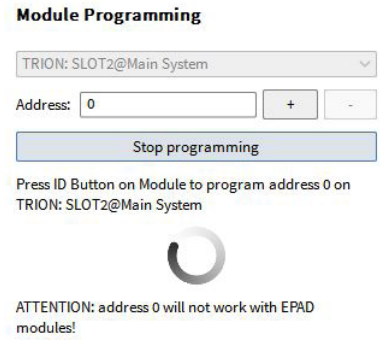


Fig. 19: Programming the module addresses

6. Keep the ID button of the DAQP module pressed until the address increases. Repeat that procedure for all DAQP modules.
7. After finishing, press on *Stop programming* and close the window by pressing *Close & Scan* (see *Fig. 20*) or start the programming for another serial port.

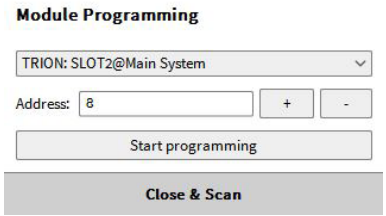


Fig. 20: Finish the module programming

8. OXYGEN will now read the actual settings from the DAQP modules and write them to the channel settings in the software

INFORMATION

A click on Scan for modules will only scan for modules that have already been programmed and store the actual module settings

The modules will appear in the Channel List now and the settings can be edited.

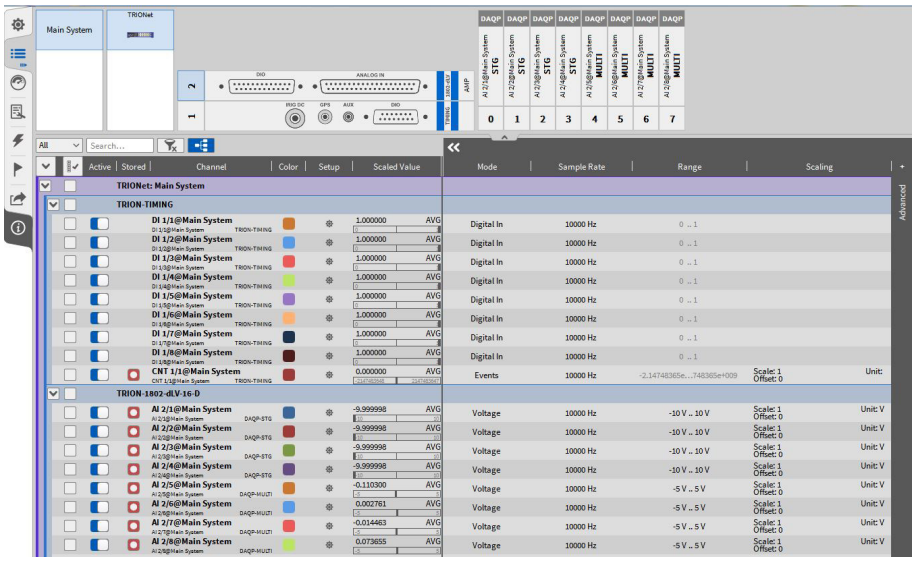


Fig. 21: DAQP modules in the Channel List connected via TRION-1802-dLV¶

Starting OXYGEN

When starting OXYGEN, the measurement screen is displayed. OXYGEN will instantly start to acquire data but will not store it yet. *Fig. 22* shows an overview of the measurement screen and some important buttons and menu tabs.

Fig. 22: Measurement screen

1. Software mode indicator
2. Design mode
3. Record
4. Stop
5. Open data file
6. Data channel list menu
7. Instruments menu
8. Export menu

Connect and set up signals and sensors

Open the Data Channel List by double clicking/tapping on the menu tab on the right side or by swiping it over the whole measurement screen, seen in *Fig. 23*.

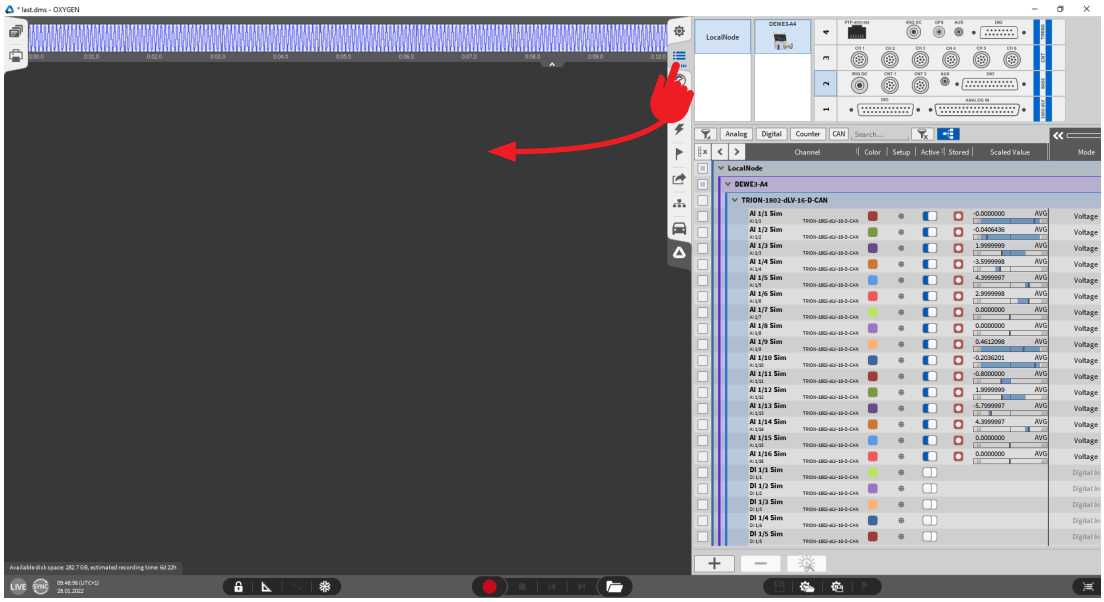


Fig. 23: Expanding data channel list

Changing channel settings

The next step is to change the channel settings:

1. Click on the channel name in the list to enter a new name.
2. Alternatively, the channel settings will also open by clicking on the gear button (see *Fig. 24*).

There different settings are available

- Sensor scaling (unit and scaling or sensitivity factor)
- Table scaling for a non-linear scaling

All settings are automatically saved when entered and do not have to be saved separately.

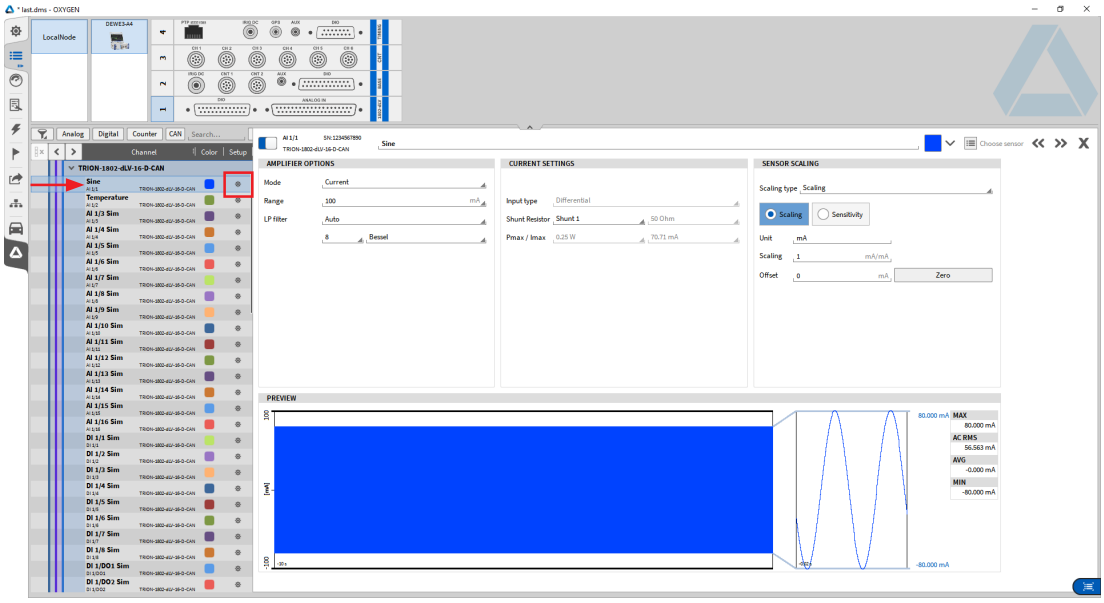


Fig. 24: Changing channel settings

Design the measurement screen

After the channel settings are done, design the measurement screen to your needs:

1. Double-click/tap on the menu tab or swipe the menu to the right.
2. Click or tap on the *Instrument* menu tab and drag and drop a recorder on the measurement screen.

More instruments can be added and adjusted like this, when being in *Design Mode* (see 2 in *Fig. 22*).

3. Click on the *Data Channel* menu tab and add the signal by selecting the instrument and the signal to be shown or by drag and dropping the signal into the instrument.
4. Disable the *Design Mode*.

The design of the measurement screen is now finished.

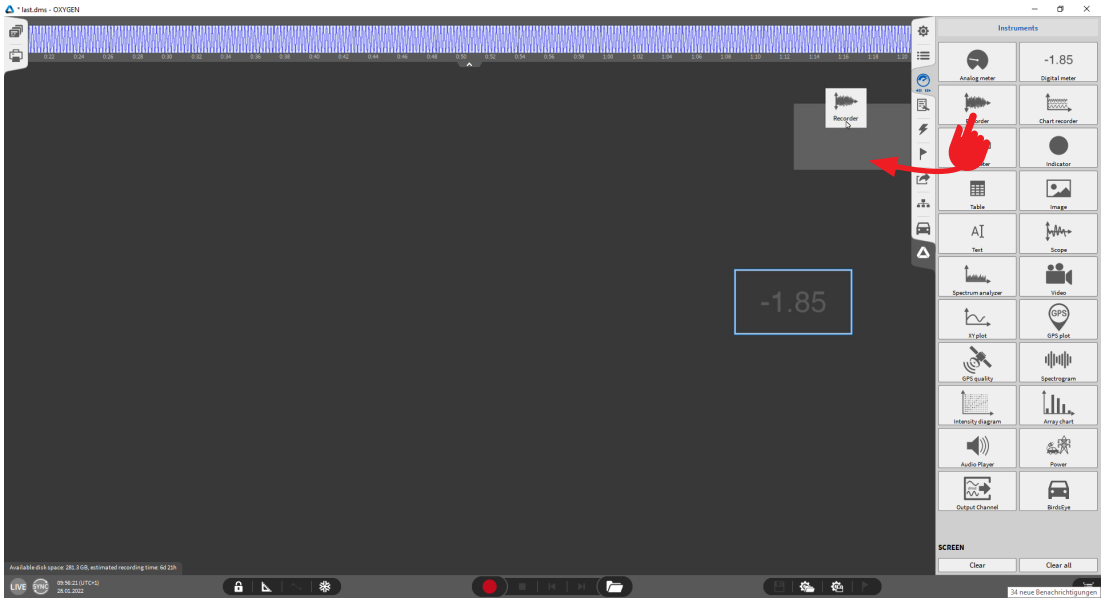


Fig. 25: Designing the measurement screen

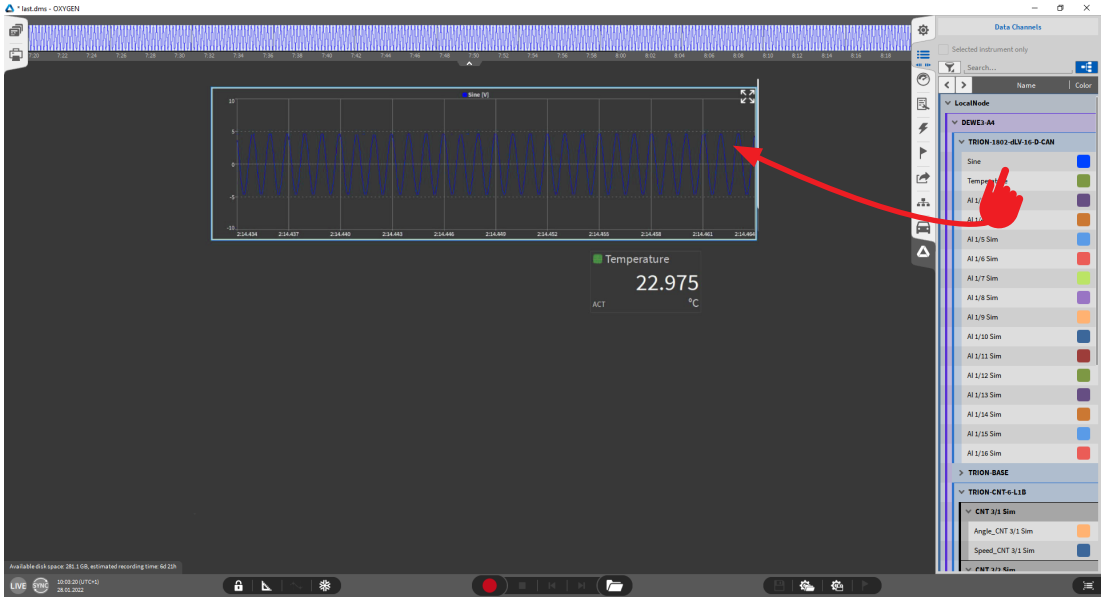


Fig. 26: Selecting instrument and signal

Record

To start the recording proceed as follows.

1. Click on the record button.

   The red border and the REC indicator seen *Fig. 27* in the lower left corner displays, that the recording is going on.
2. Click on the Stop button to stop the recording.

The recording process is now finished.

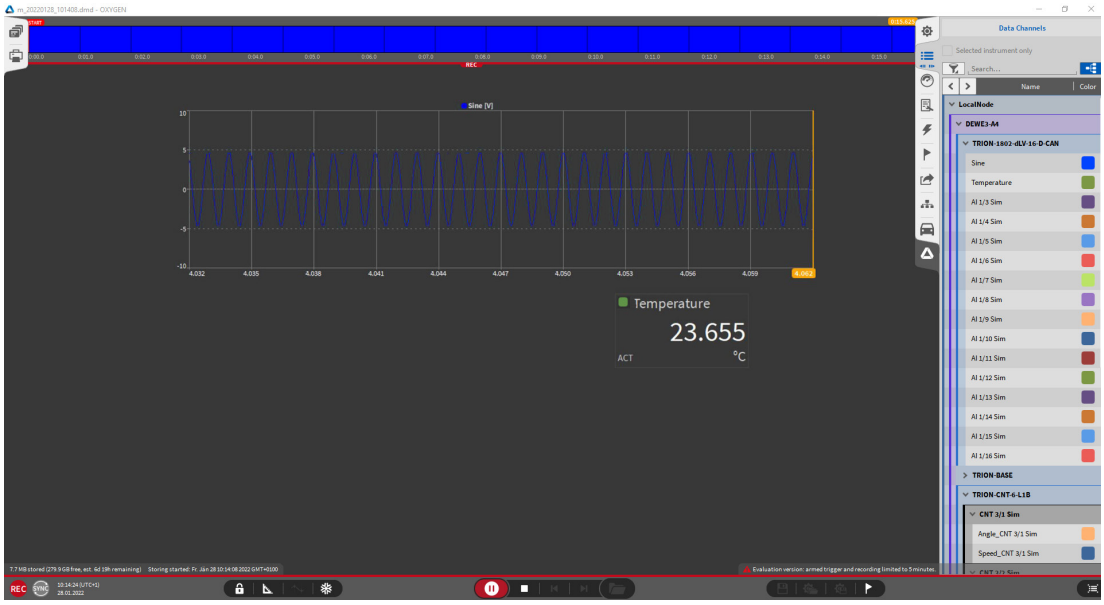


Fig. 27: Recording

Open datafile and export

To open a datafile, proceed as follows:

1. Click on the file button, and select the corresponding file (see *Fig. 28*).

   The green border and PLAY indicator in the lower left corner indicate that a file is loaded for post-processing (see *Fig. 29*).

2. To export the data, click or tap on the *Export Settings* menu tab.
3. Select the desired format and the channels to be exported.
4. Click on the export button seen in *Fig. 29*.

The exporting process is now finished.

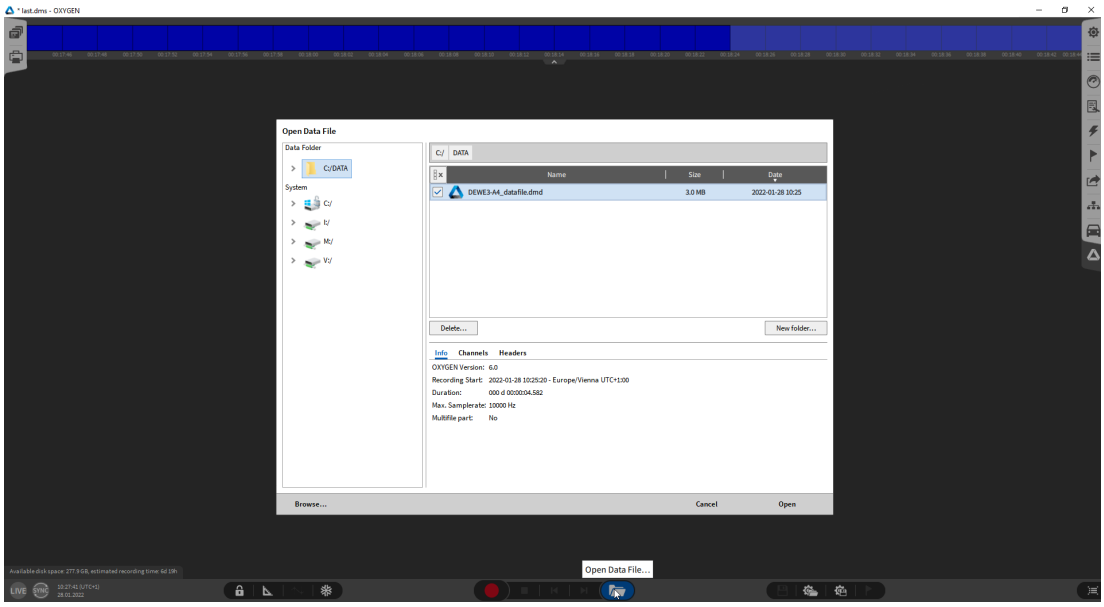


Fig. 28: Opening data file

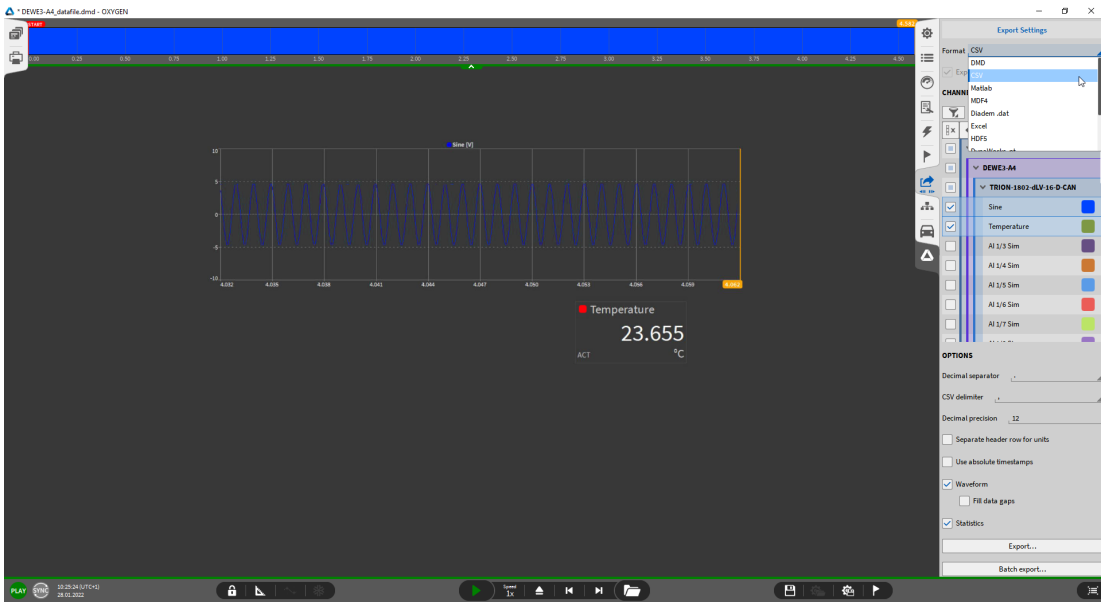
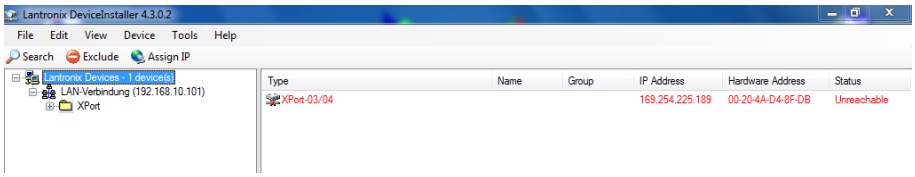


Fig. 29: Exporting data file for post-processing

Setup of Lantronix Ethernet connector

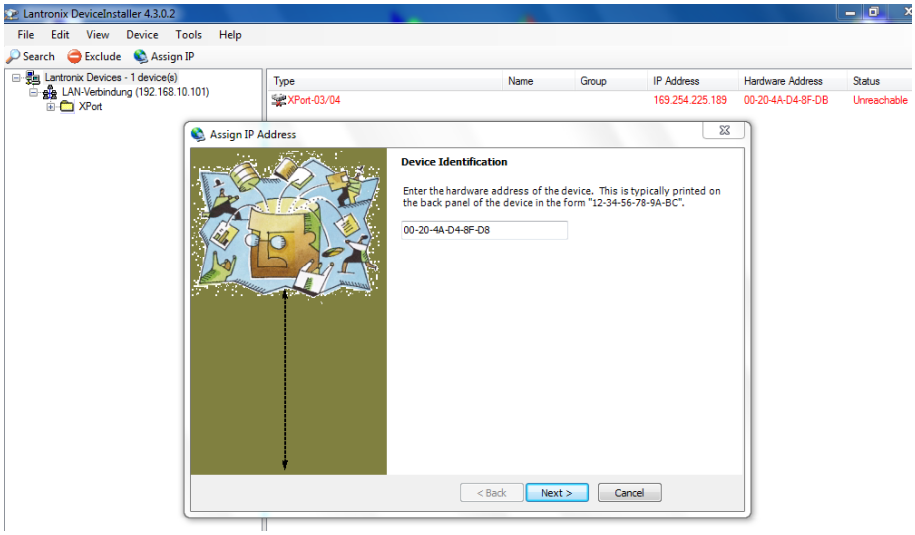
To set up the Lantronix Ethernet connector, proceed as follows:

1. Install the “DeviceInstaller” and “CPR Manager”. The files are usually located at E:\files\drivers\04_Communication\LANTRONIX_XPort
2. Connect the DEWE-30-xx via Ethernet to your PC and run the “DeviceInstaller”. If you press the search button, you should see the the (XPort) device.

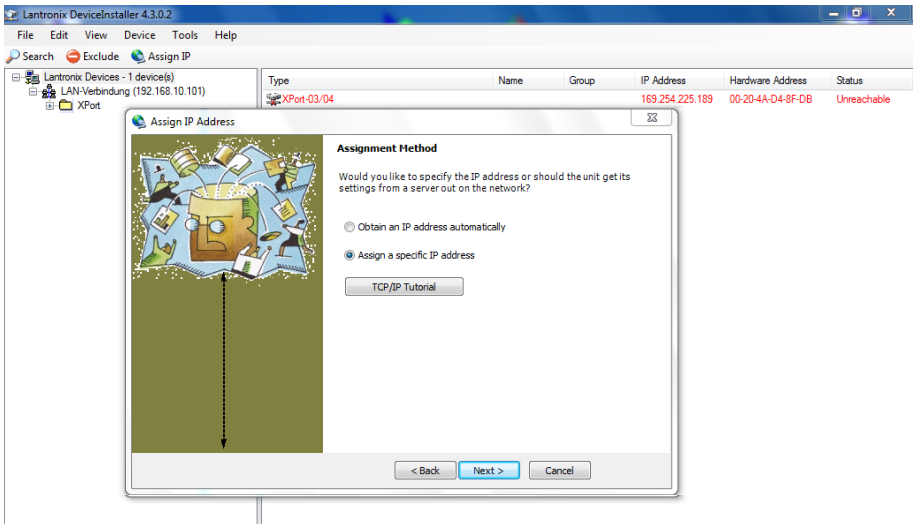


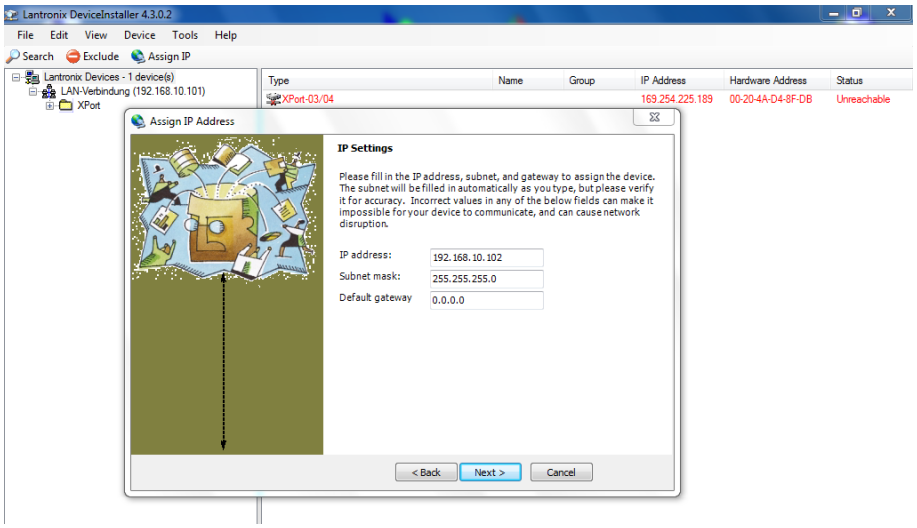
INFORMATION If the XPort module is red, you have an IP address problem (other subnet or network).

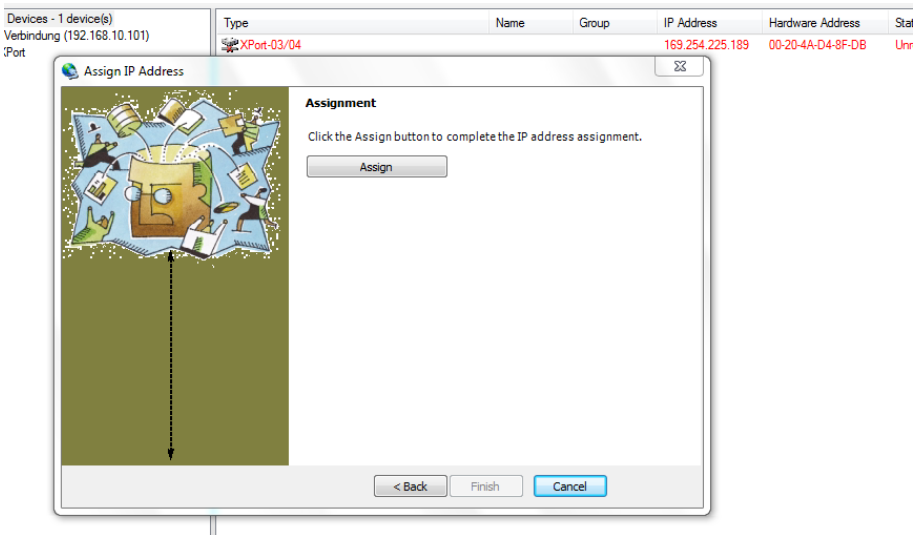
3. To configure the IP address, press “Assign IP” and fill in the MAC address of the DEWE-30-xx.

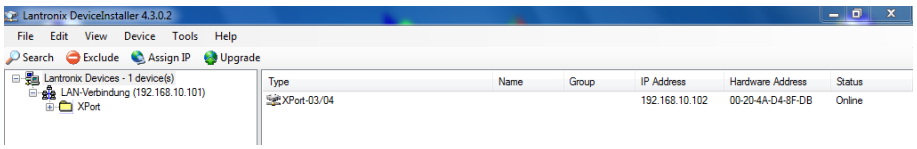


INFORMATION You will find the MAC address of the Lantronix module on a sticker on your DEWE-30-xx system.



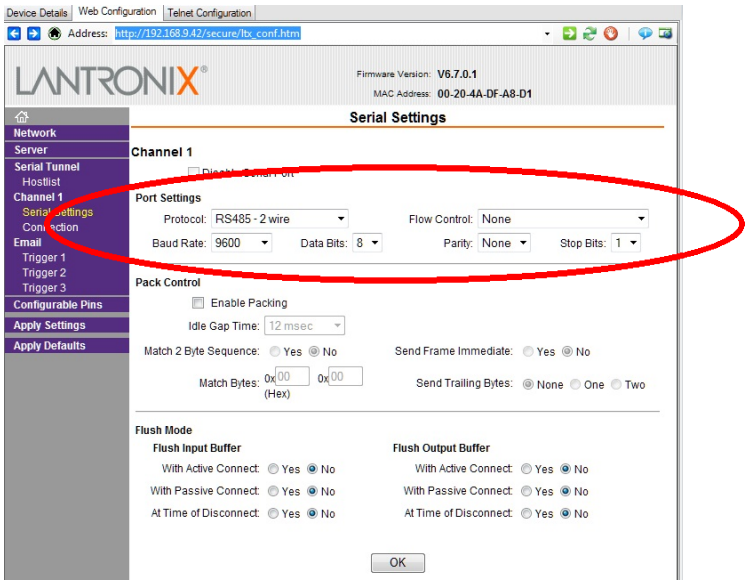




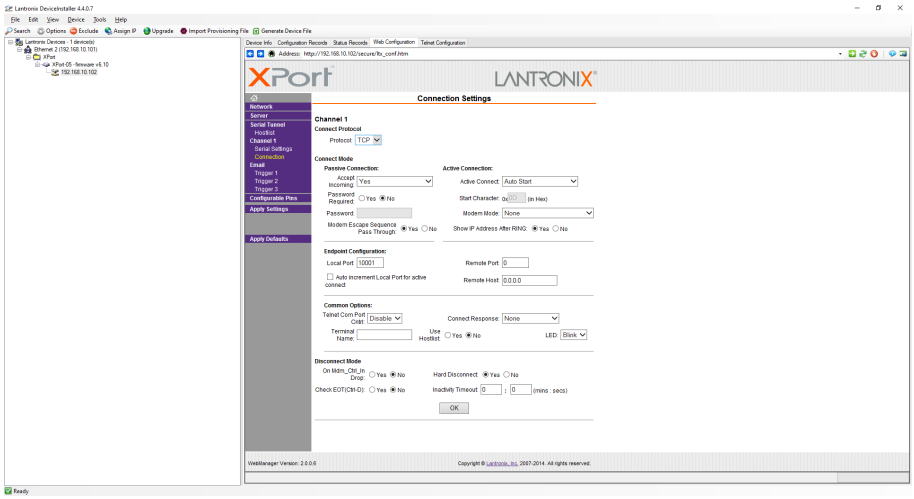


The LANTRONIX XPort module is now connected to the PC.

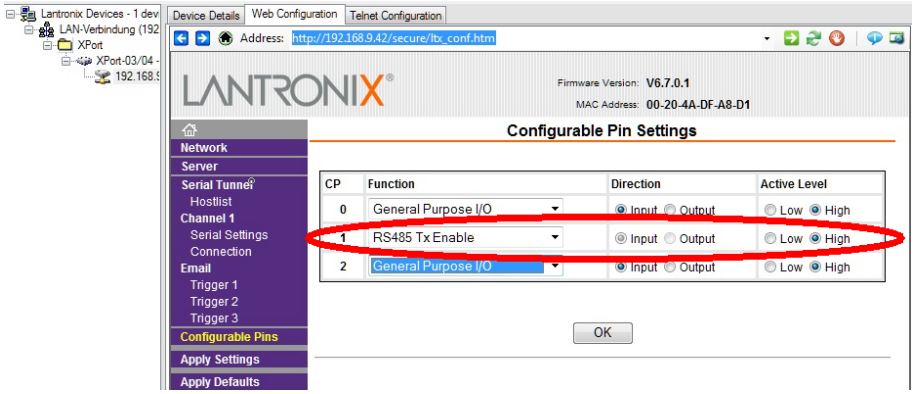
4. For communicating with DEWETRON DAQP amplifiers some settings on the web interface of the XPort device are necessary:
   - Go to “Web Configuration”
   - Click on the Home button next to the address bar.
   - You will be asked for username and password. Leave them empty and click OK.
5. Set the port settings



6. Set the connection settings



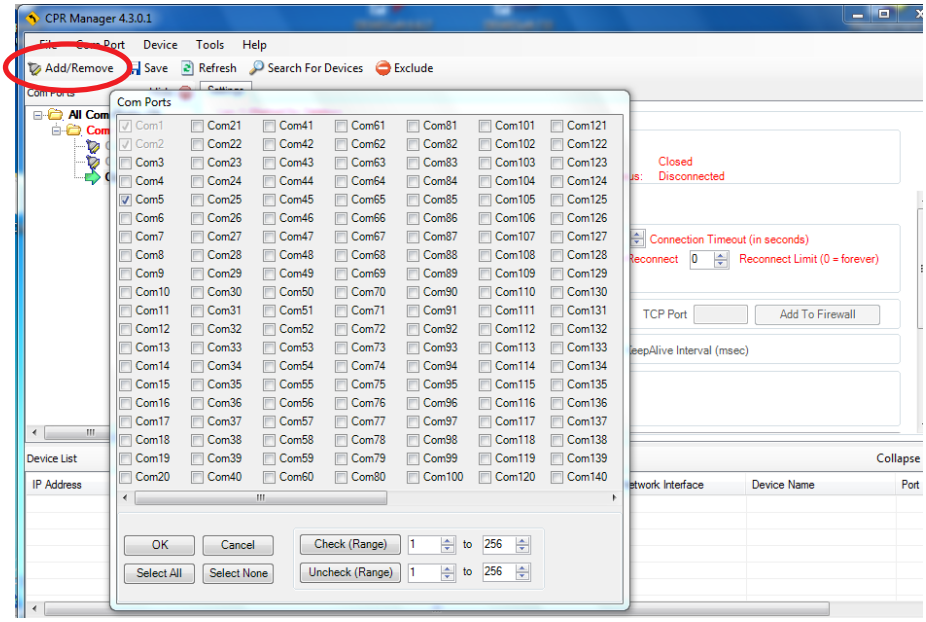
7. Set the pin settings:



If you make any changes:

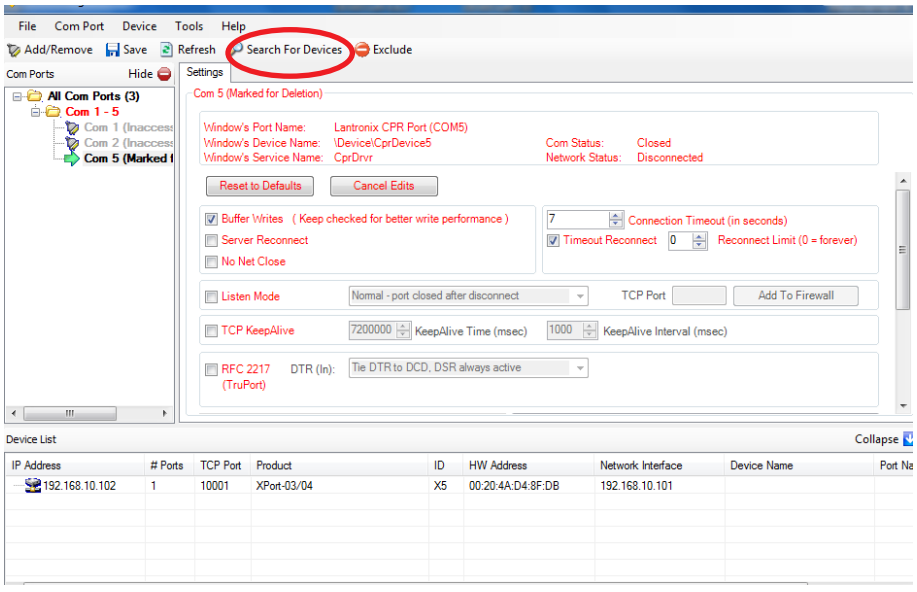
- Click the “OK” button at the bottom.
- Click “Apply Settings” on the left.
- Close and reopen the *Lantronix DeviceInstaller*.
- Now your changes are displayed correctly.

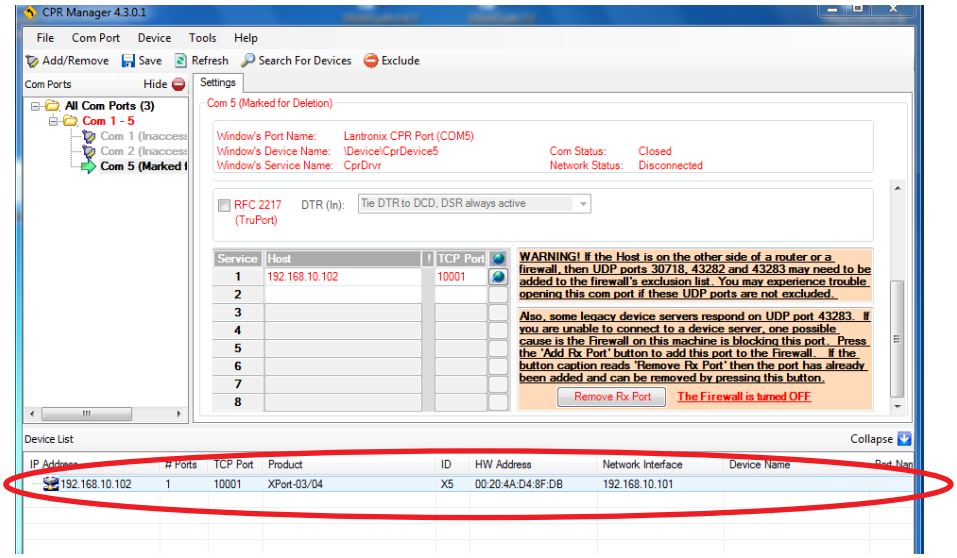
8. To install a virtual COM port, open the CPR manager.



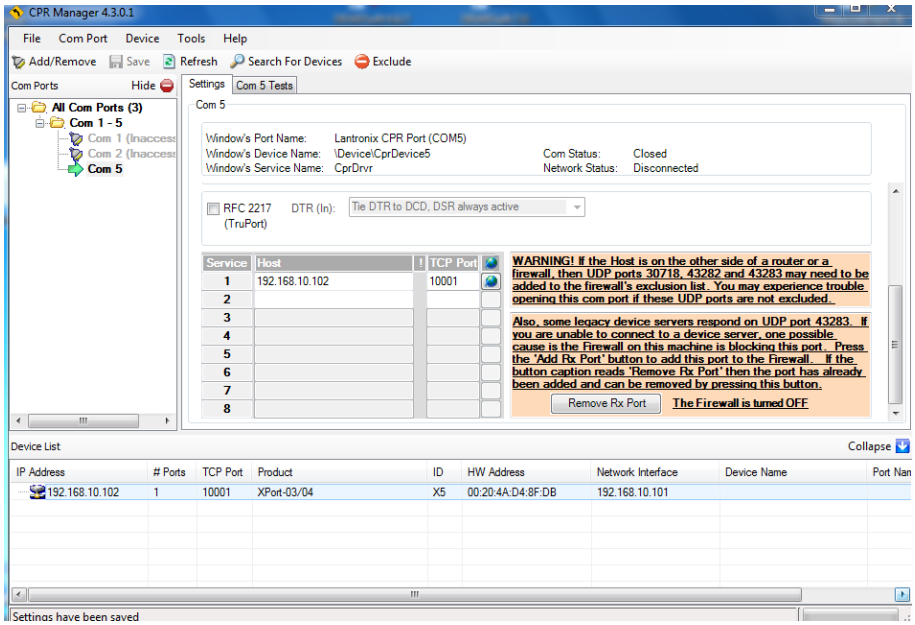
9. Add a new port, e.g. COM5.

10. Click on „Search for Devices“.

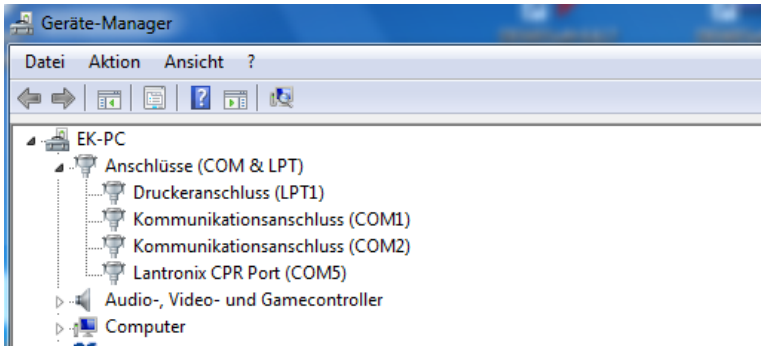




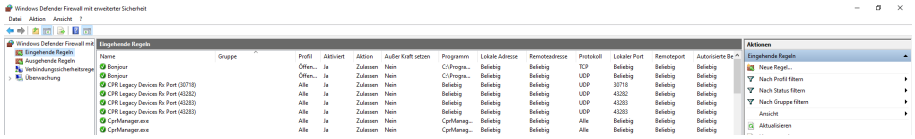
11. By double-clicking on the displayed device, the module in the list above becomes visible. The line appears in red until you press the „Save" button.

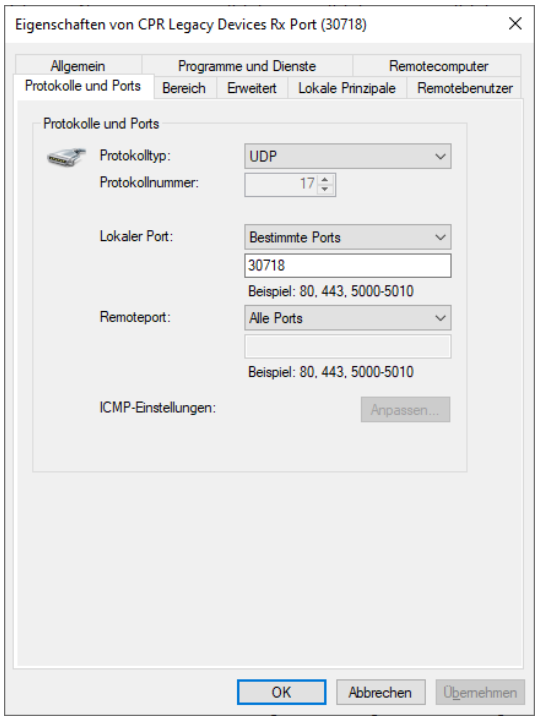


You can now find the Lantronix port in your Windows device manager listed as a COM port.



12. Adjust the Firewall settings for all 4 ports.





The Lantronix Ethernet connector has now been set up and is ready to use.

Connection to a TRION(3)-1802/1600-dLV-32 module

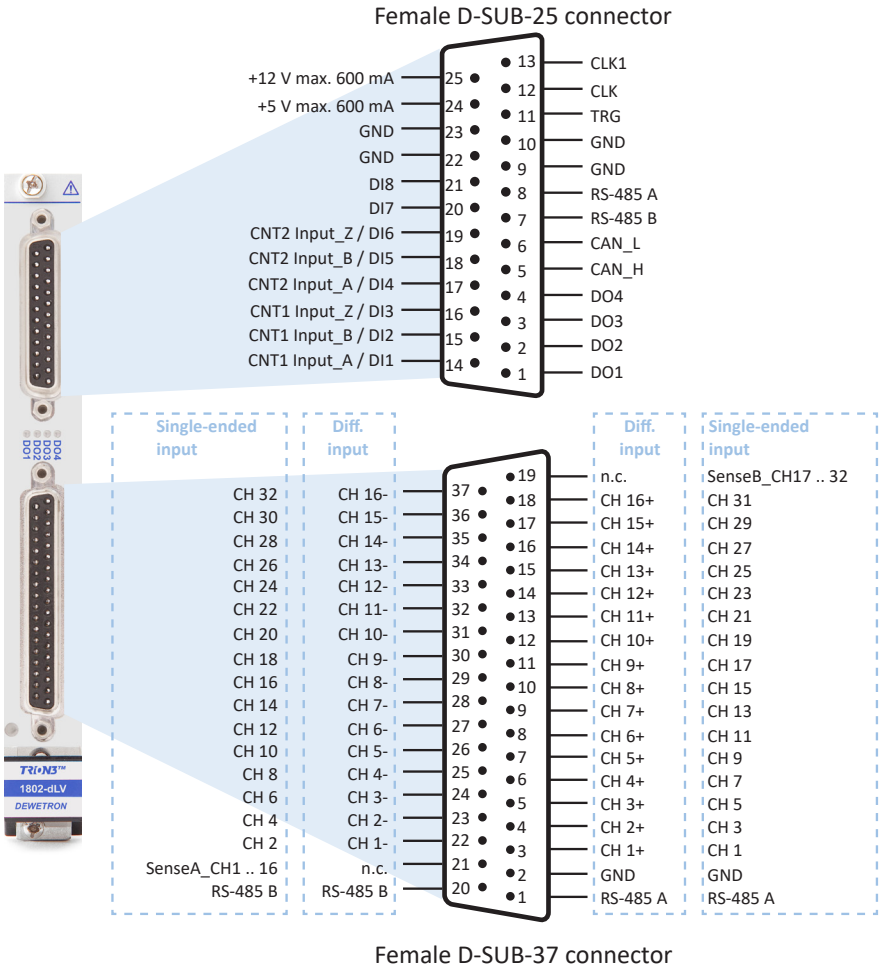


Fig. 30: Connection

A C15Axx cable is required for connecting 16 channels to a TRION3-1802-dLV module in single-ended configuration. Two C15Axx cables are necessary for 32 channels.

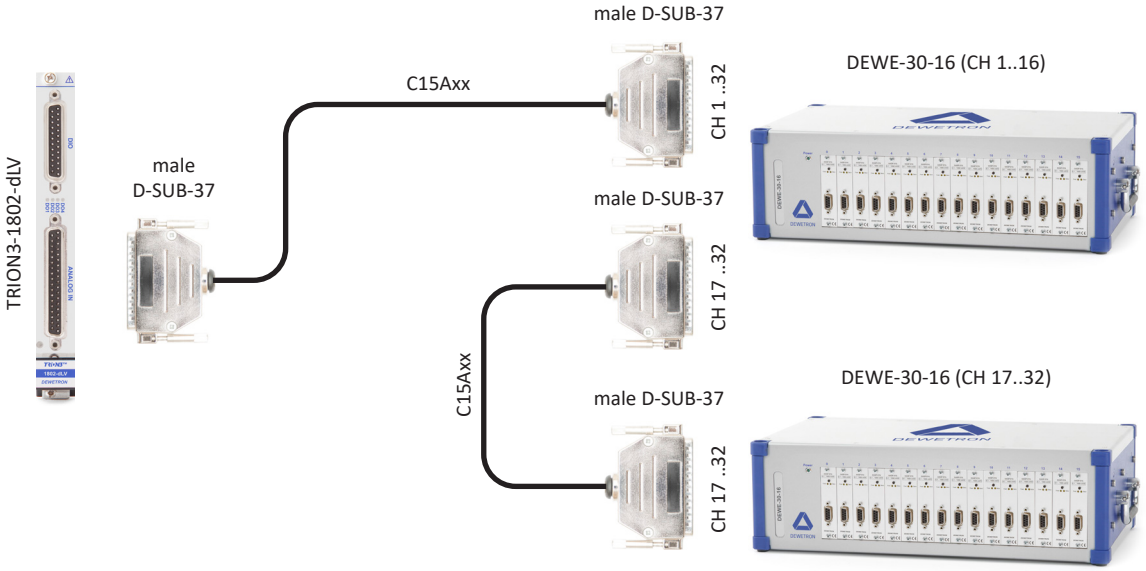


Fig. 31: Connection with C15Axx cable

Connect multiple DEWE-30-xx systems to 3rd party hardware

Several DEWE-30 instruments can be connected to a third-party data acquisition system. To do this, the first DEWE-30 must be connected to an RS-232 (COM) interface of the DAQ system. The DEWE-30 instruments can be connected to each other via the RS-485 interface. A D-SUB-15 cable is needed for this purpose.

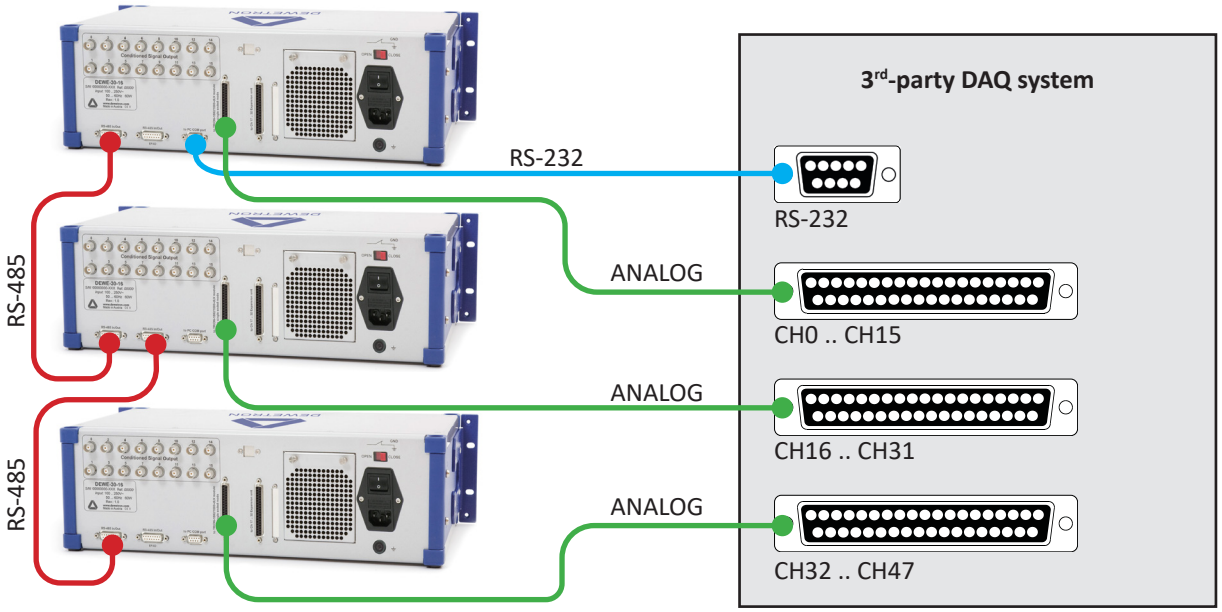


Fig. 32: Example of a connection 3 DEWE-30-16 instruments to a 3rd-party DAQ system

NOTICE

Connect a maximum of 4 DEWE-30-xx systems together via one RS-485 bus. If more than 4 systems are connected, data transmission may be unstable. If you would like to connect more devices, contact DEWETRON for support.

Maintenance and service

The information in this section is designed for use by qualified service personal.

Service interval

Clean dust from the chassis exterior/interior and exchange filter foam based on the operating environment.

Actions	On demand	At least once a year	Every 5 years
Clean dust from chassis exterior/interior	Depending on environmental conditions	x	-
Change chassis fan	x	-	x
Calibrate TRION modules	-	x	-
Clean filters	Depending on environmental conditions	x	-

Fig. 33: Service intervals

Cleaning the system

- Clean surface of the chassis with dry lint-free cloth.
- Use a dry velocity stream of air to clean the chassis interior.

  Do not use harsh chemical cleaning agents.

NOTICE

Many components within the chassis are sensitive to static discharge damage. Always wear a ground wrist strap and service the unit only in static-free environment.

WARNING

Risk of injury

Disconnect all cables before servicing the unit.

Cleaning the filter pad

Requirements

- TORX T10 screw driver

WARNING

Do not attempt to remove filter covering plate when in operation.

Power off the instrument and disconnect the device from the power supply first.

Any voltage over 50 V connected to the modules must also be terminated.

Procedure

1. Switch-off the instrument and disconnect any high-voltage sensors/connectors.
2. Loosen 2 screws of the fan cover plate at the right side of the system using a TORX T10 screwdriver.

3. Remove the covering plate andthe filter pads.
4. Clean the filterpads with a dry velocity stream of air.
5. Reinsert the cleaned filter pads and gently tap them.
6. Remount the covering plate by tightening the 2 screws using a TORX T10 screwdriver.

   NOTICE Do not switch on the instrument before the covering plate has not been fully reattached.

The filter pad cleaning procedure is now finished.

System recovery

For more information regarding a total recovery refer to the corresponding total recovery technical reference manual shipped with your DEWE3 system.

Updates

Windows and antivirus/security software

Before installing Windows software updates consult with DEWETRON for compatibility guidance. Also keep in mind that the use of any antivirus or other security software may slow down your system and may cause data loss.

Software updates

NOTICE

The system BIOS is protected by password. Any change in the BIOS may cause a system crash. When the system is booting, do not press ESC-button on keyboard. This may clear the BIOS settings and cause system faults.

Any change in the file structure as deleting or adding files or directories might cause a system crash.

Before installing software updates contact DEWETRON or your local distributor. Use only software packages which are released by DEWETRON. Further information is also available in the Internet (http://www.dewetron.com).

After power off the system wait at least 10 seconds before switching the system on again. Otherwise the system may not boot correct. This prolongs also the life of all system components.

Training

DEWETRON offers training at various offices around the world several times each year. DEWETRON headquarters in Austria have a very large and professional conference and seminar center, where training classes are conducted on a regular basis starting with sensors and signal conditioning, A/D technology and software operation.

Dewetron Inc. in the USA also has a dedicated training facility connected to its headquarters, located in Rhode Island.

For more information about training services visit https://www.dewetron.com/academy.

Calibration

Every instrument needs to be calibrated at regular intervals. The standard norm across nearly every industry is annual calibration. Before your DEWETRON data acquisition system is delivered, it is calibrated at our DEWETRON headquarter. Each of this system is delivered with a certificate of compliance with our published specifications. Detailed calibration reports from our calibration system are available for purchase with each order. We retain them for at least one year, so calibration reports can be purchased for up to one year after your system was delivered.

Support

DEWETRON has a team of people ready to assist you if you have any questions or any technical difficulties regarding the system. For any support contact your local distributor first or DEWETRON directly.

For Asia and Europe contact:

DEWETRON GmbH
Parkring 4
8074 Grambach
AUSTRIA

Tel.: +43 316 3070
Fax: +43 316 3070-90
E-Mail: support@dewetron.com
Web: http://www.dewetron.com

The telephone hotline is available
Monday to Friday between
08:00 and 17:00 CET (GMT +1:00).

For the Americas contact:

DEWETRON Inc. (HQ USA)
2850 South County Trail, Unit 1
East Greenwich, RI 02818
USA

Tel.: +1 401 284 3750
Toll-free: +1 866 598 3393
Fax: +1 401 284 3750
Email: support@dewetron.com
Web: http://www.dewetron.com

The telephone hotline is available
Monday to Friday between
08:00 and 16:30 EST

Service and repairs

We are very sorry that your DEWETRON system is not operating properly. Our team is here to ensure that your DEWETRON product is returned to peak performance as quickly as possible.

Help us to provide you with the best support by following the RMA policy.

Some problems can be solved remotely by our support team. To facilitate a quicker resolution to the problem and save unnecessary shipping costs, we ask you to first have your problem investigated by our technical support before sending your product. Contact details for our support can be found on our website. Describe the error accurately and with as much detail as possible. This helps expedite the repair process.

If a repair is necessary, complete our online RMA form. You will then receive an RMA (Return Material Authorization) number and detailed instructions that identify where to ship the damaged product.

Products arriving at our repair department without RMA require follow-up calls and investigation, which lead to a longer turnaround. Only the team of DEWETRON is allowed to perform any kinds of repairs to your system to assure a safe and proper operation in future.

INFORMATION

Only the team of DEWETRON is allowed to perform any kinds of repairs to your system to assure a safe and proper operation in future. For information regarding service and repairs contact your local distributor first or DEWETRON directly.

INFORMATION

Any spare parts (screws, backplanes, cables etc.) must be obtained from DEWETRON only.

CE certificate of conformity

CE certificate of conformity DEWE-30-32

Manufacturer	DEWETRON GmbH
Address	Parkring 4 8074 Grambach, Austria Tel.: +43 316 3070-0 Fax: +43 316 3070-90 Email: sales@dewetron.com http://www.dewetron.com
Name of product	**DEWE-30-32**
Kind of product	*Data acquisition instrument*

The product meets the regulations of the following EC-directives:

73/23/EEC

Directive on the approximation of the laws of the Member States relating to electrical equipment designed for use within certain voltage limits amended by the directive 93/68/EEC

89/336/EEC

"Directive on the approximation of the laws of the Member States relating to electromagnetic compatibility amended by the directives 91/263/EEC, 92/31/EEC, 93/68/EEC and 93/97/EEC

The accordance is proved by the observance of the following standards:

LVEMC	**Safety**	IEC/EN 61010-1:1992/93 IEC/EN 61010-2-031	IEC 61010-1:1992/300 V CATIII Pol. deg. 2 IEC 1010-2-031
	Emissions	EN 61000-6-4	EN 55011 Class B
	Immunity	EN 61000-6-2	Group standard

Graz, April 28, 2010

Place / Date of the CE marking

Dipl.-Ing. Roland Jeutter / Managing director

CE certificate of conformity DEWE-30-16

Manufacturer	DEWETRON GmbH
Address	Parkring 4 8074 Grambach, Austria Tel.: +43 316 3070-0 Fax: +43 316 3070-90 Email: sales@dewetron.com http://www.dewetron.com
Name of product	**DEWE-30-16**
Kind of product	*Data acquisition instrument*

The product meets the regulations of the following EC-directives:

73/23/EEC

Directive on the approximation of the laws of the Member States relating to electrical equipment designed for use within certain voltage limits amended by the directive 93/68/EEC

89/336/EEC

"Directive on the approximation of the laws of the Member States relating to electromagnetic compatibility amended by the directives 91/263/EEC, 92/31/EEC, 93/68/EEC and 93/97/EEC

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LVEMC	**Safety**	IEC/EN 61010-1:1992/93 IEC/EN 61010-2-031	IEC 61010-1:1992/300 V CATIII Pol. deg. 2 IEC 1010-2-031
	Emissions	EN 61000-6-4	EN 55011 Class B
	Immunity	EN 61000-6-2	Group standard

Graz, October 14, 2008

Place / Date of the CE marking

Dipl.-Ing. Roland Jeutter / Managing director