CONTENTS

ProgressXmanager

ProgressXmanager is the software tool used for the configuration and operation of all the instrumentation devices in the ProgressX product range using a PC type personal computer. The following description particularly refers to the first product in this range, the BPX / LPX.

1. General presentation

ProgressXmanager may be installed on all PC type personal computers equipped with Windows® (95, 98, Me, 2000 or XP) and a RS232 serial port. This program is used to:
- Define a complete configuration and to transfer it to a BPX / LPX device.
- Define a complete configuration and save it on a file. This operation is possible even if the BPX / LPX is not connected to the computer (Off-line mode).
- Review a BPX / LPX configuration and modify it before saving on a file or re-transferring to the device.
- Review a BPX / LPX configuration from a file, modifying if necessary and transferring to a BPX / LPX.
- On-line display of measurements and outputs (alarm relays and analogue outputs).
- Simulate outputs by forcing the threshold relays status or applying the analogue outputs power supply.

2. Installation

Minimum required configuration:
- Pentium™ 200 MHz Processor or equivalent,
- 128 Mb of RAM,
- 10 Mb of available disk space,
- A CD-ROM drive,
- An RS232 communication port,
- A mouse,
- A 1024x768 resolution colour screen.

Installation is completely automatic and is executed in a Windows environment.
The steps below must be followed to install ProgressXmanager:
- Launch Windows.
- Insert the ProgressXmanager CD-ROM in the drive.
- The installation menu is displayed. Follow the on-screen instructions carefully for installation.

N.B.
- The operator is required to have ADMINISTRATOR rights on the computer to install this software, if this is not the case, this operation should be applied by the computer base maintenance technician.
- If the installation menu is not automatically displayed on inserting the CD-ROM, launch installation by running 'SETUP.EXE', which is located at the CD-ROM drive's root.

3. Usefull information

Configuration is prepared on-screen by completing the fields provided.
Once the operator considers the settings are correct they can be transferred to the BPX / LPX (if it is connected!) or to a file for review at another time.

The programme integrates two operation modes, one for use when the BPX / LPX is connected to the RS232 link and one when it is not connected:

- ON-LINE Mode: All functionalities are accessible (file or BPX / LPX read operation, file or BPX / LPX write operation, on-line measurements, output simulations).
- OFF-LINE Mode: Only configuration file handling is possible.

Configuration protection:
Access to the BPX / LPX configuration modification may be protected with a password.
Caution: This password is saved in the BPX / LPX memory! If a password is forgotten, please contact Regulateurs GEORGIN for assistance.

4. Off-Line operation mode

Working off-line is mainly used for saving configurations to file for transfer at a later stage to on-site BPX / LPX devices.
The program generates one file for each configuration.
The OFF-LINE operation mode is accessed when the BPX / LPX is not connected via the RS232 link on running the programme. The status bar in the lower section of the main window indicates which operation mode is running: ON-LINE or OFF-LINE mode.

4.1 Defining a configuration

Preparation for a new configuration may be accessed via the <File>\<New configuration> menu.
When requested by the programme, enter the BPX / LPX model for which the settings are to be configured.
Complete the fields provided on-screen: all settings are visible on the same page! (The documentation entitled "Digital data processing" may be referred to if necessary for further information on these settings).
When the settings are considered complete, save the file, either by clicking on the <Save configuration> button, or using the <Save as> option in the <File> menu.
N.B.
The "COMMENTS" window open on the screen may be used to enter three lines of text, which are saved in the file but are not transferred to the BPX / LPX.

4.2 Opening and modifying a configuration file

Search for the file to modify using <Open> option in the <File> menu or <Open configuration> in the <Configuration Management> menu and then proceed with the same actions as described in the previous paragraph.

N.B. All configuration files are named as follows "xxx.prx".

5. On-Line operation mode

5.1 Connection settlement

Switch on the BPX / LPX and then connect it to one of the personal computer's serial ports.
Then run the ProgressXmanager.

If the BPX / LPX is not detected, change the communication port via the <Options>\<Serial port selection> menu.

Then reboot the connection via the <Configuration Management>\<Upload configuration>.
This operation also a simple way to transfer between OFF-LINE and ON-LINE mode, without rebooting programme execution.

The status bar in the lower section of the main window indicates which serial port is in use.

5.2 Using password protection

The configuration installed on a BPX / LPX may be protected by a 5 character password, which prevents any new settings being sent.

Password management is accessible via the <Options>\<Password management> menu:

- *Password activation*: to validate write protection on the BPX / LPX by entering a new password.
- *Password deactivation*: removes write protection on the BPX / LPX.
- *Password update*: to modify the current password.

When protection is active, any attempt at modifying configuration requires the password to be entered, either on launching the connection with the BPX / LPX, or via the <Options>\<Login> menu.

The status bar in the lower section of the main window displays modification rights: *Read/Write* or *Read*.

Caution:
 If a password is forgotten, please contact REGULATEURS GEORGIN for assistance.

5.3 Reading a BPX / LPX configuration

The configuration is automatically read on opening the programme.

It may also be read at any time in the <Configuration Management>\<Retrieve configuration> menu.

5.4 Loading a configuration to the BPX / LPX

Update the on-screen configuration and run the configuration transfer to BPX / LPX using the <Download configuration> button or <Configuration Management>\<Download configuration> menu.

To access this functionality the BPX / LPX must not be protected by a password, or the operator must know the valid password (<Options>\<login> menu).

N.B.
Transfer may also be launched by connecting the BPX / LPX in OFF-LINE mode.
However, data will not be sent if the BPX / LPX is protected by a password or if it is different to the model for which settings have been prepared!

5.5 On-Line measurement

Input and outputs status may be read using the BPX / LPX.

The on-line measurements mode is accessible in the <Measurements>\<On-Line Measurements> menu.

5.6 Outputs simulation

The "Output Simulation" mode is used to change the outputs provided in the BPX / LPX irrespective of the measurement applied to input.

This mode is accessible in the <Measurements>\<Output Simulation> menu.

Where this operation mode is activated, the "RUN" LED on the BPX / LPX front panel stops flashing and remains lit.

Caution:
● This mode is unavailable when the BPX / LPX is locked with a password.
● In the event that the RS232 cable is disconnected, the BPX / LPX restores the measurement mode (standard operation mode) after one-tenth of a second.

6. Configuration examples

Example 1:
The following example is a configuration for a 2 wires 4/20mA pressure transmitter.

INPUT

Type	Unit	Represented physical value
Transmitter 2/3/4 wires	mA	mA

Low range	High range		Low range	High range	
4 mA	20 mA		0 mA	150 mA	

Associated function

Square root extraction ☐

☑ NAMUR NE43 Standard

Low range	High range
3.8 mA	20.5 mA

This example shows a 0/150 bar pressure transmitter providing a 4/20 mA signal

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SENSOR FAULT MANAGEMENT

On relay

Relay 1	Relay 2
On	On

On 4/20 mA current loop n°1

☑ Substituted value   23 mA

In the event of a fault (shorted or broken line) the relays switch to "Activated" and the analogue output goes to 23 mA.

OUTPUTS

Relay 1

Mode	Threshold	Hysteresis	Temporisation
On Rising	70 bar	1 %	150 ms

Relay 2

Mode	Threshold	Hysteresis	Temporisation
Off Rising	70 bar	0 %	1000 ms

4/20 mA analog output n°1

Output	Low limit	High limit
Direct	4 mA	20 mA

Threshold set values are determined according to the desired pressure.
The hysteresis value is given as a % of the input range and is 1.5 bar in this instance.
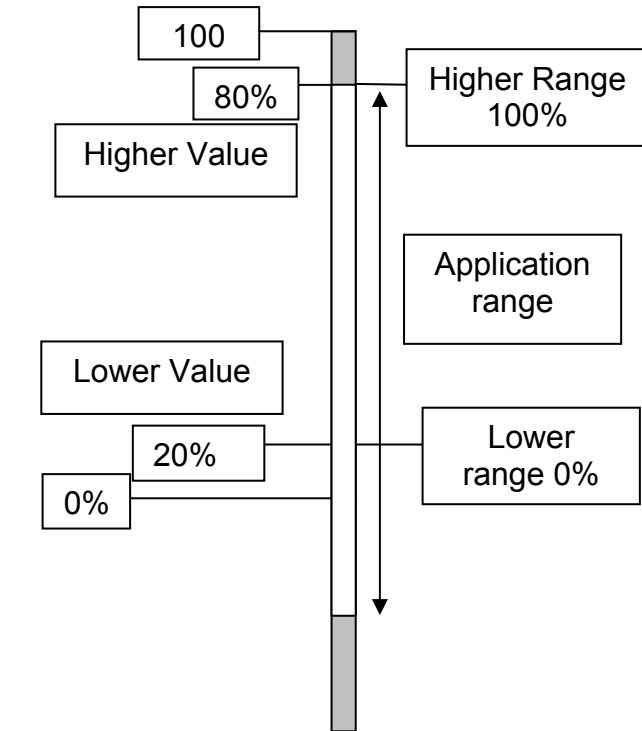The analogue output varies between 4 and 20 mA in proportion to the measured value.

Example 2

The following example is the configuration for a potentiometer input with a defined application range.

INPUT

Type	Unit	Represented physical value
Potentiometer (%)	%	%

Low range	High range		Low range	High range	
0 %	100 %		0 %	100 %	

Associated function

Operating range measurement

Low value	High value
0 %	100 %

Operating range measurement