

**Smar** - Profibus View  
First in Fieldbus

JAN / 08  
**Profibus View**  
VERSION 1



USER'S MANUAL

# Profibus View – Profibus PA Device Parameterization Software





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# PROFIBUS VIEW – PROFIBUS PA DEVICE PARAMETERIZATION SOFTWARE

## Introduction

Profibus View is the tool to parameterize PROFIBUS PA field devices. The DF73 Linking Device module (HSE PROFIBUS Gateway) and the PBI (Profibus Interface) make it possible to communicate with the field devices. This tool provides several functionalities such as calibration, monitoring, online and offline parameterization and device diagnostic.

For further details about DF73 module refer to the DF1302 manual and about PBI refer to the Appendix A in this manual.

### NOTE

The Profibus View should only be used with the PBI interface in laboratory, not being recommended for networks where communication exists with other master.

## Communication

The communication between the Profibus View and DF73 is performed through TCP/IP connection and the PBI access directly the computer USB port. The communication is established by just opening the Profibus View tool. Next the DF73 or PBI starts an acyclic connection with the device and indicates to the Profibus View about the communication status.

When there is a successful connection with the device, Profibus View starts reading/writing message transmission. However, if any error occurs, Profibus View will start a new connection, after the number of retries.

The user can see the status of the transmitted messages through the **Status Communication** parameter, which appears in the Profibus View initial window:

GOOD – Communication is OK.

STARTING – Starting the communication.

RETRYING – Problems in the communication. After the number of retries, Profibus View will start a new connection.

READING – Parameter reading.

WRITING – Parameter writing.

## Supporting Tools

Profibus View is not a stand-alone tool, so it depends on the supporting tools to be opened. The tools below support the Profibus View:

*System302 Studio* – Tool that has the System302 applications

*Profibus View Configurator* – Profibus View setting tool

With these tools, the user is able to set the DF73 IP or the PBI USB port, the type and address of the device that will be parameterized by the Profibus View.

## Live List

The Live List available in the supporting tools provides the list of all devices present in the Profibus network, with the name and the address of each one. It is an easy way to view the network and also to access the Profibus View.

### IMPORTANT

Before loading the Live List, check if the DF73 is set properly.

The devices that are not from Smar or with the IDENT\_NUMBER\_SELECTOR parameter set as “Profile Specific Ident Num” can be assigned as **Others** in the Live List.

To open the Profibus View tool select the device in the Live List. Profibus View shows the “tree view” which gives access to the specific features of the selected device. If the device appears as **Others** in the Live List, a general window will open (Device Settings).



Figure 1 - Live List of the Profibus View Configurator

### NOTE

The Live List function is available just for configurations that use DF73 module.

## Manual Configuration to Access the Profibus View

Another option to access the Profibus View is by the Manual Configuration window. In this, the user can set the DF73 IP or PBI USB port, the type and address of the device.

After setting all the parameters of the window, the user can click the **Load Device** button to open the Profibus View.

Profibus View shows the “tree view” which gives access to the specific features of the selected device. If the device appears as **Others** in the Live List, a general window will open (Device Settings).



Figure 2 - Setting the Device in Manual Mode

## General Setting

The **General Setting** window of Profibus View provides a list with the main blocks described by the Profibus standard.

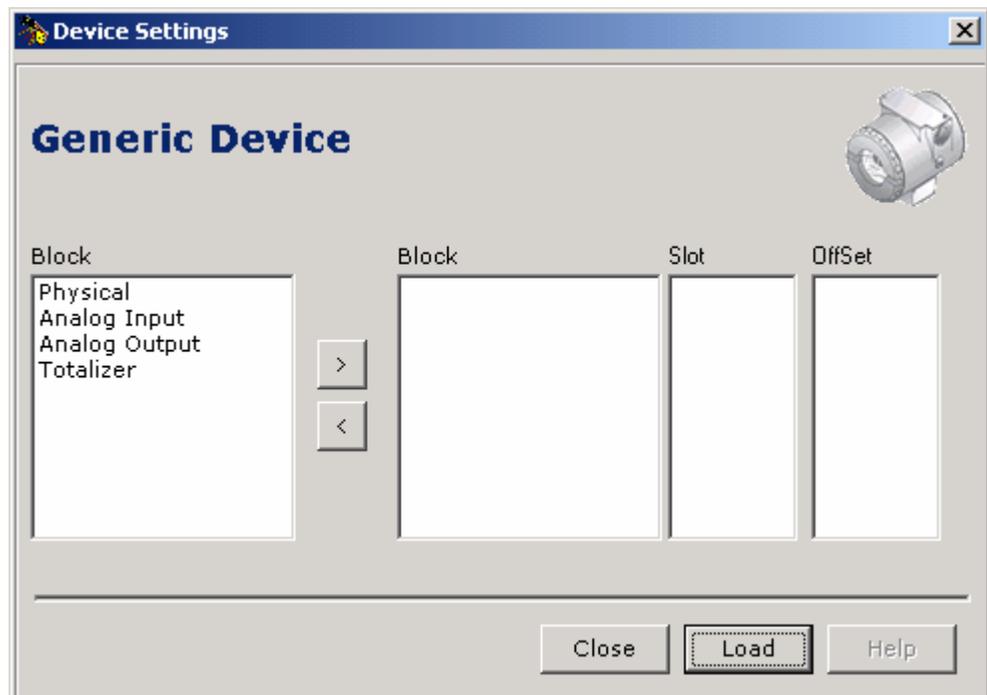


Figure 3 – Main Blocks of Profibus PA Devices

A step by step procedure for the general setting is described below:

1. Select the block supported by the device and click the  button.
2. Type the slot of the block chosen in the previous step.



**Figure 4 – Typing the Block Slot**

3. Type the block Offset.



**Figure 5 – Typing the Block Offset**

Repeat these steps for each block. To remove blocks from the configuration, click the  button.

When finishing the setting, click the **Load** button to open the Profibus View tool.

Profibus View shows the “tree view” with the blocks selected in the general setting, and also a window to Read and Write the parameters (Read/Write parameter).

## **Read/Write Parameter**

It allows setting the device parameters that are not available in the Profibus View windows.

There are two main differences between the Read/Write Parameter windows for Smar devices and **Other** devices. The Read/Write Parameter window for Smar devices shows the Block option to select the block type, and the Index option to enter the index of the block. The Read/Write Parameter window for **Other** devices shows the Slot option, as mentioned in **General Setting** item, and the Index (Considering the Offset) to enter the index of the device adding the Offset. These two windows are shown in Figures 6 and 7.

**Read/Write Parameter**

Block: Transducer Block

Index:

Data Type: Unsigned\_8

Value:

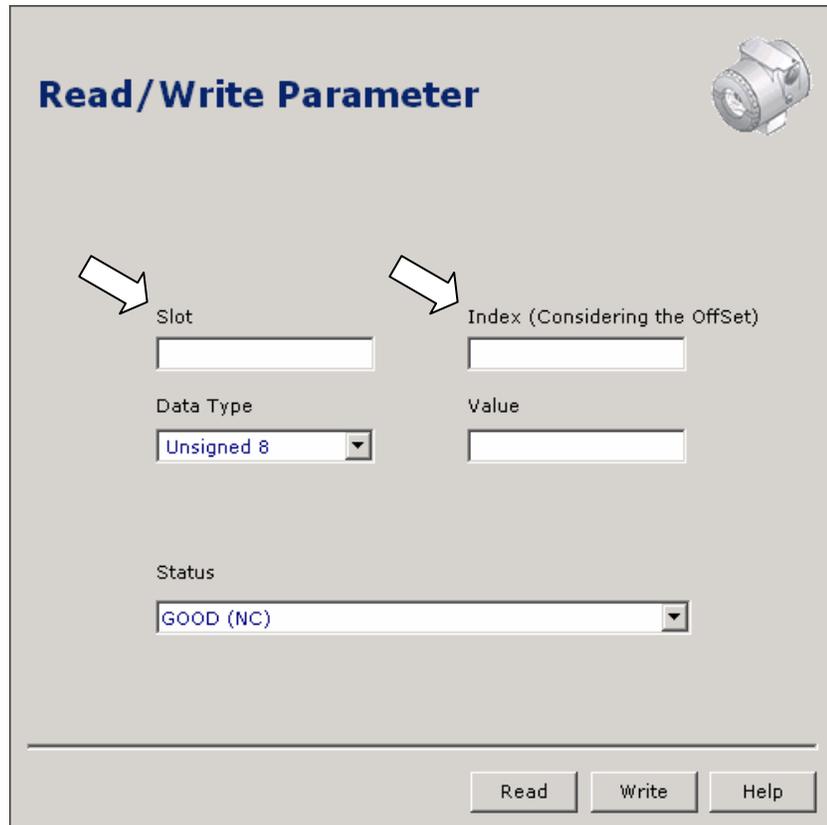
Status: GOOD (NC)

Read Write Help

**Figure 6 - Read/Write Parameter Window for Smart Devices**

It is mandatory to fill in all fields:

- **Block** – select the block type
- **Index** – index of the block
- **Data Type** – parameter type (Float, Unsigned 8, Unsigned 16, Unsigned 32, DS-33)
- **Value** – this field must be filled in only for writing
- **Status** – parameter status, only for DS-33 data type



**Figure 7 - Read/Write Parameter Window for Other Devices**

It is mandatory to fill in all fields:

- **Slot** – block identification number. It has the parameter selected
- **Index** – index adding the Offset
- **Data Type** – parameter type (Float, Unsigned 8, Unsigned 16, Unsigned 32, DS-33)
- **Value** – this field must be filled in only for writing
- **Status** – parameter status, only for DS-33 data type

For more information about the index of each block, refer to the device manual and also to the Function Blocks manual

## Slot and OffSet

The Table 1 below shows slots and offsets for all Smar Profibus PA devices. For other devices, consult their manufacturers.

Device	Block	Slot	OffSet
LD303	Physical	1	116
	Analog Input	1	16
	Totalizer	2	16
TT303	Physical	1	116
	Analog Input 1	1	16
	Analog Input 2	2	16
DT303	Physical	1	116
	Analog Input	1	16
FP303	Physical	1	116
	Analog Output	1	16
FY303	Physical	1	116
	Analog Output	1	16
TP303	Physical	1	116
	Analog Input	1	16
	Totalizer	2	16
IF303	Physical	1	116
	Analog Input 1	1	16
	Analog Input 2	2	16
	Analog Input 3	3	16
	Totalizer 1	4	16
	Totalizer 2	5	16
FI303	Physical	1	116
	Analog Output 1	1	16
	Analog Output 2	2	16
	Analog Output 3	3	16

*Table 1 – Slots and Offsets for Blocks of the Smar Equipments*

## Error messages

When a communication problem occurs between the Profibus View and the device that is being parameterized, Profibus View shows error messages. Some error messages are listed:

For this message, the possible causes can be:

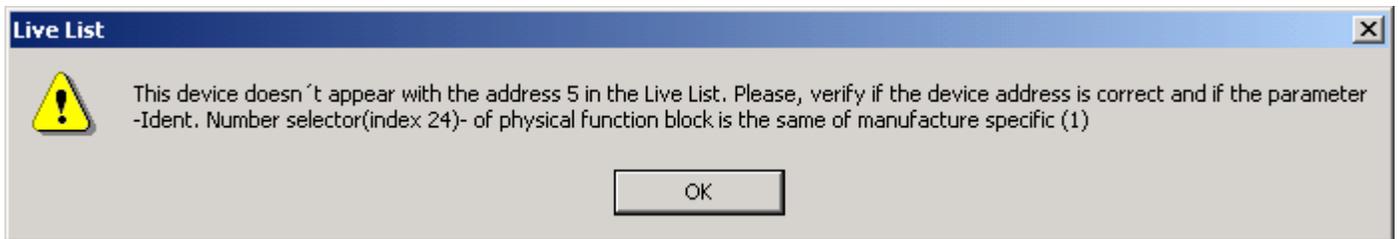
- Communication problem between the Profibus View and DF73 (IP is set incorrectly, network problems, port used for other application)
- Field device address is incorrect
- Field device is not in the DF73 Live List (coupler is set incorrectly)
- More than one field device with the same address
- DF73 or was set improperly for cyclic messages (insufficient time to pass the token)
- Error in the network installation



**Figure 8 – Error Message**

For this message, the possible causes can be:

- Incorrect device address (Check the device address in the DF73 Live List)
- IDENT\_NUMBER\_SELECTOR parameter is not set on “Manufacturer Specific” (Check this parameter and also if ID Number is correct in the DF73 or Live List)



**Figure 9 – Error Message**

This message appears if there is any problem between the Profibus View and DF73 connection. Also appears if there is any problem between the DF73 and device connection.



**Figure 10 – Error Message**

This message appears when the PC is without the Profibus View HardKey.



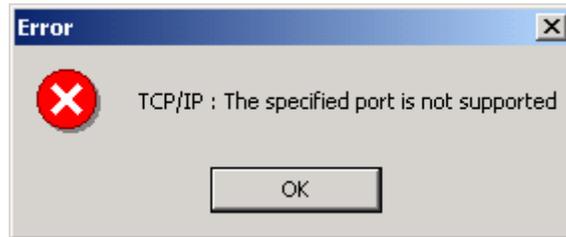
**Figure 11 – Error Message**

This message appears when Profibus View sends a read/write message and the device does not respond.

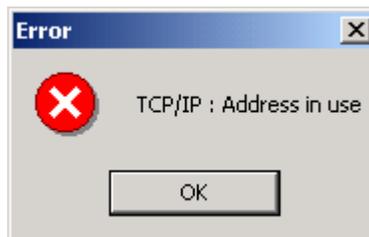


**Figure 12 – Error Message**

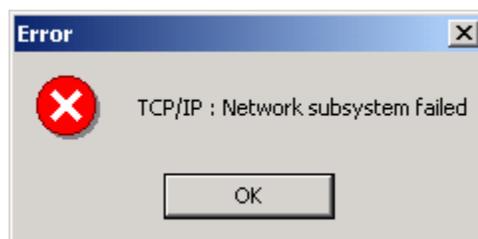
Other error messages can be related to TCP/IP errors, such as the showed below:



**Figure 13 - Error Message**



**Figure 14 - Error Message**



**Figure 15 - Error Message**



**Figure 16 - Error Message**



**Figure 17 - Error Message**



**Figure 18 - Error Message**



**Figure 19 – Error Message**

## **Configuration screens for TT303**

To exemplify how to use the Profibus View, three screens are shown for TT303.

For further details about Smar Profibus PA devices, refer to the each device manual.

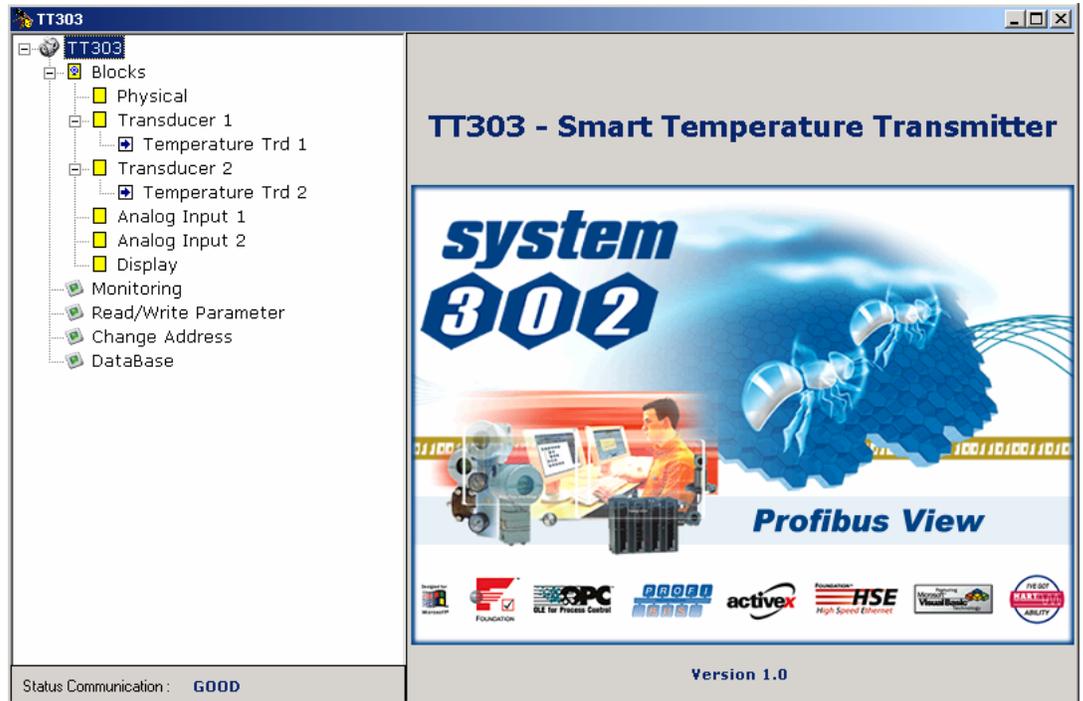


Figure 20 – Opening the Profibus View

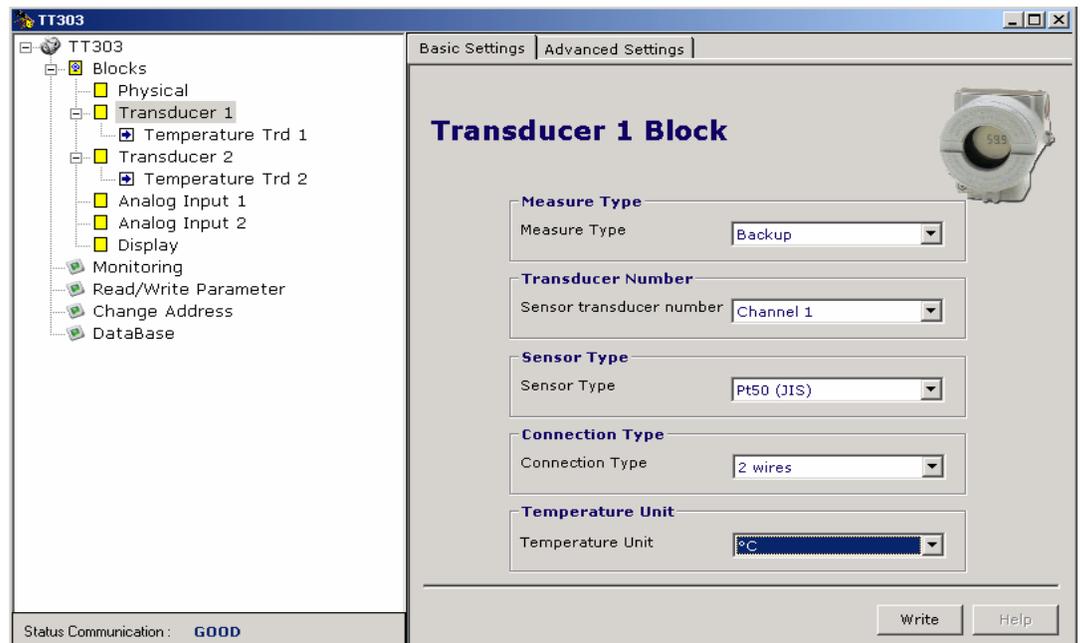


Figure 21 – Basic Settings for TT303

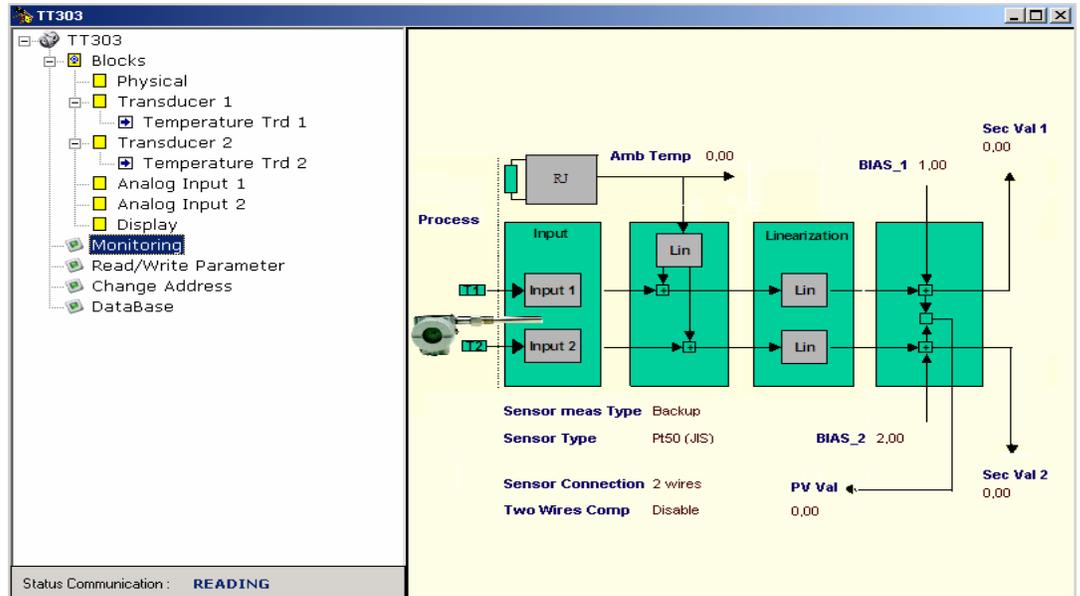


Figure 22 – Monitoring the TT303

## Considerations about PBI

PBI is a USB interface of Profibus communication used between Profibus View communication and Profibus devices. Although the PBI is connected in the PC USB port, it use a virtual serial port to access the equipment.

Below have some procedures about the driver installation necessary for the virtual serial port creation:

- Connect the PBI interface in the USB port of the computer, next a new hardware will be found;
- Use *wizard* to install a new drive;
- Driver should be installed manually;
- In the button **browse** (in the **wizard** screen) the client should select the Driver\_USB directory. This is in the Profibus View Stand Alone CD;
- Verify in the device manager of Control Panel the address of the virtual serial port maid;
- Identify in the support tool of Profibus View the address of the virtual serial port used by PBI.

# ***Appendix A***

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