Installation and Maintenance Instruction Manual

Device Type Manager (DTM)
SILVER SERIES

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1 Introduction

This instruction manual is a guide for installing and using the intelligent pressure and level transmitter SILVER SERIES using HART. This DTM is developed to make configuration changes of the SILVER SERIES transmitters easy. This DTM can be used with almost every FDT-container.

2 Installation

2.1 Before DTM Installation

The DTM software is used along with a HART modem and a FDT frame application (Eg. PACTware). Before using the DTMs on your Computer or Laptop the following needs to be done:

1. Install the HART Modem drivers

2. Install FDT Frame Application – Eg. PACTware

These installation files and manuals will be provided by the manufacturer of the HART modem or can be downloaded from the internet.

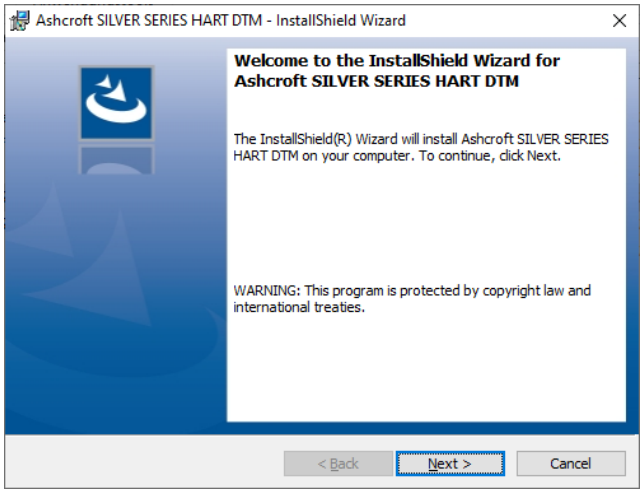
2.2 DTM Installation

To install the SILVER SERIES DTM on your system, you have to download the installation file. The latest revision can be downloaded from the Ashcroft Instruments website: www.ashcroft.eu, under section Products >Transducers and Transmitters > *PS55 or CS55*> ZIP Download.

To start the installation, always extract **Ashcroft SILVER SERIES HART DTM zip file**.

Select **Ashcroft SILVER SERIES HART DTM.exe** * (You must have administrator rights, do not use the .msi file)

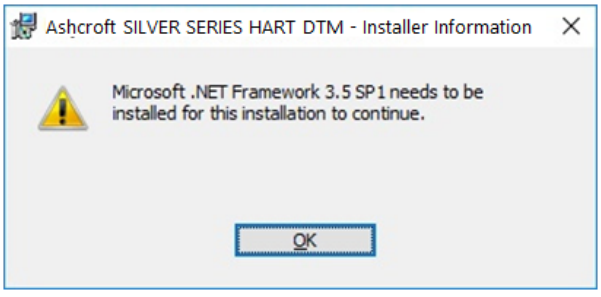
*Minimal software requirements: Windows 7 (32 or 64 bit) or higher, for older versions please contact Ashcroft Instruments.



Microsoft .net Framework 3.5

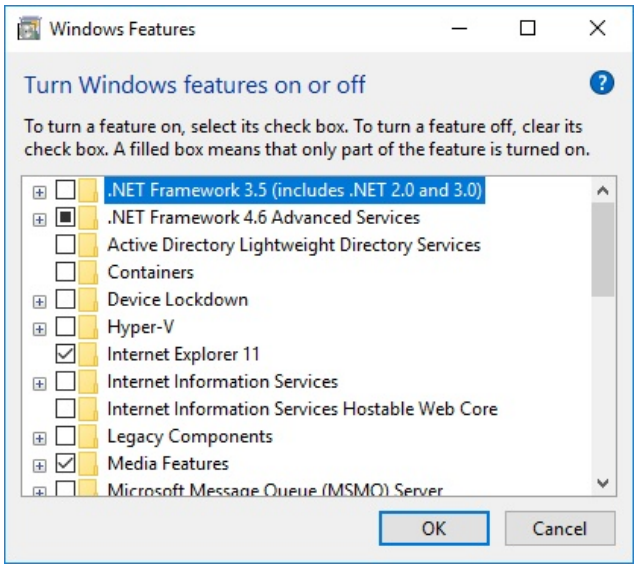
The SILVER SERIES DTM requires .NET Framework 3.5 from Microsoft. If the framework is already installed the setup will continue.

When the framework is not installed the following message appears:



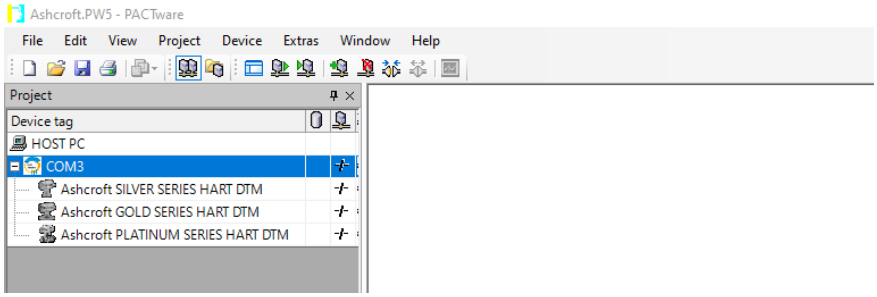
Windows 7 users can download the .NET Framework package from the following location:
https://www.microsoft.com/en-US/download/details.aspx?id=21

Windows 10 and 8 users can download the .NET Framework package by selecting the start menu and type “windows features” in the search box. The following window appears and the .NET Framework 3.5 can be enabled.



2.3 After DTM Installation

After Installation of the DTMs, the DTMs have to be added onto the FDT Frame Application(PACTware), under the port the HART Modem is connected to.



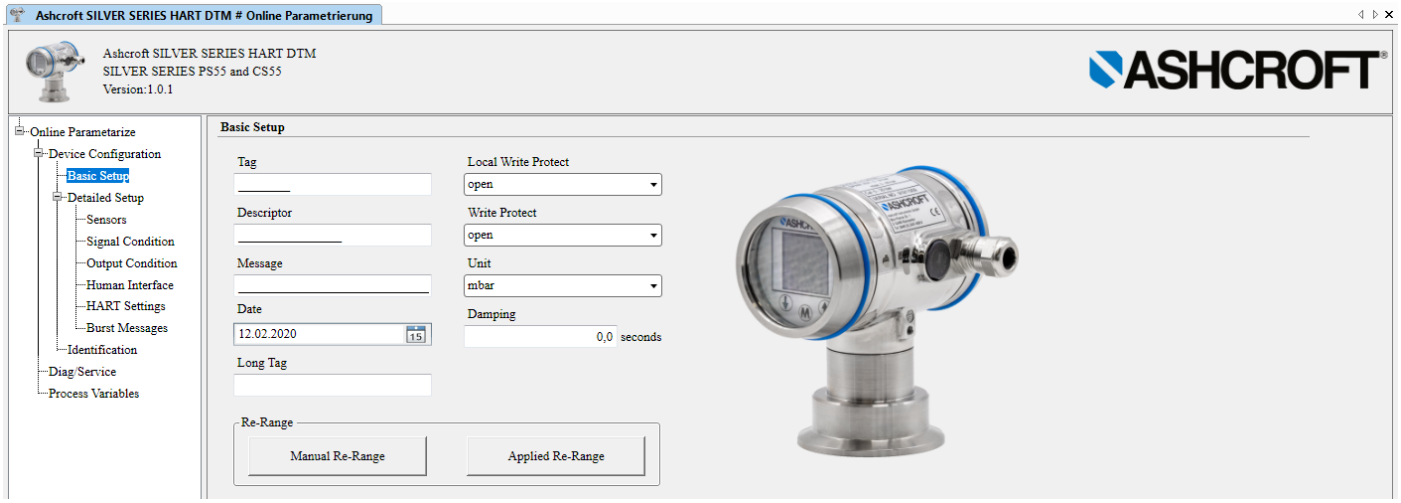
Select the DTM and connect to start the communication with the device. Double clicking the connected DTM will open the Online-parametrization window (Offline, if device is not connected).

3 DTM

The following pages describe the DTM configuration.

3.1 Basic setup

In this menu basic data of the transmitter can configured. Information like Tag Number, Descriptor and others can be entered in the text fields. In this menu it is possible to change the span (LRV and URV) of the transmitter without test pressure with the option **Manual Re-Range**, follow the displayed instructions. With the option **Applied Re-Range** the span can be changed with a test pressure, follow the displayed instructions. Damping can be adjusted between 0 and 25 seconds. With the option **Local Write Protect**, protection against local adjustment on the transmitter can be set. With the option **Write Protect**, protection against adjustment by HART® can be set. The engineering unit of the pressure and temperature can be changed in this menu.

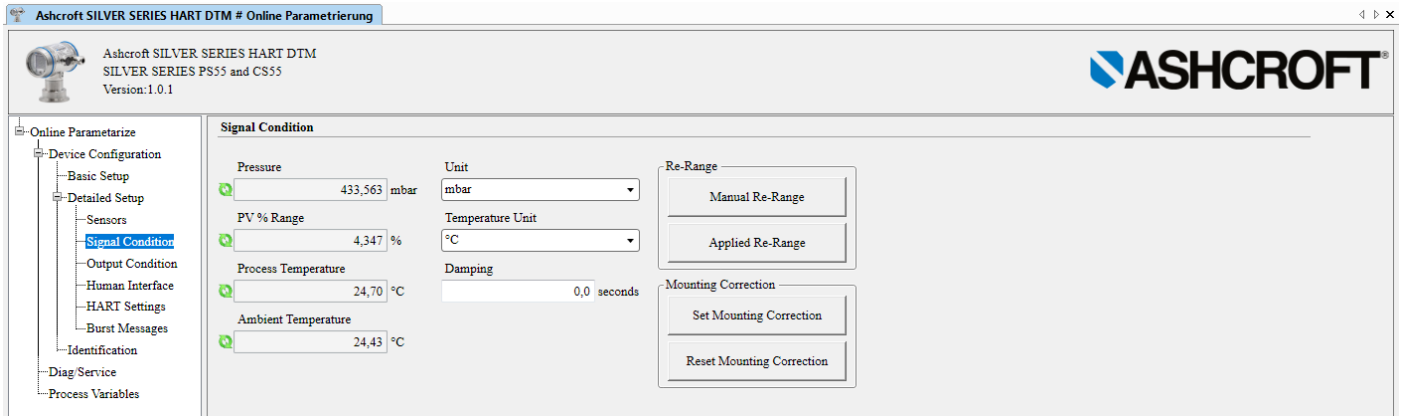


3.2 Detailed setup

This menu contains data like the actual pressure, sensor and ambient temperature, these values are refreshed every 10 seconds. The engineering unit of the pressure and temperature can be changed.

3.3 Signal condition

This menu contains data like the actual pressure, sensor and ambient temperature. These values are refreshed every 10 seconds. The engineering unit of the pressure and temperature can be changed. In this menu it is also possible to change the span (LRV and URV) of the transmitter without test pressure with the option **Manual Re-Range**, follow the displayed instructions. With the option **Applied Re-Range** the span can be changed with a test pressure, follow the displayed instructions. The mounting position effect of the transmitter can be neutralized with the option **Set Mounting Correction** or reset to factory default with the option **Reset Mounting Correction**. Damping can be adjusted between 0 and 25 seconds.



3.4 Output conditions

This menu contains the actual loop current of the transmitter. The output of the transmitter can be configured into **4-20 mA** or **20-4 mA**. With the option **Loop Simulation** a current can be simulated. Three options are available: **4 mA, 20 mA** and **Other**. With **Other** a manual value between 4 and 20 can be chosen. To end the simulation choose **End** after selecting Loop Simulation. When necessary the output can be trimmed with D/A Trim.

3.5 Human interface

In the menu Human Interface a Readout option can be configured.

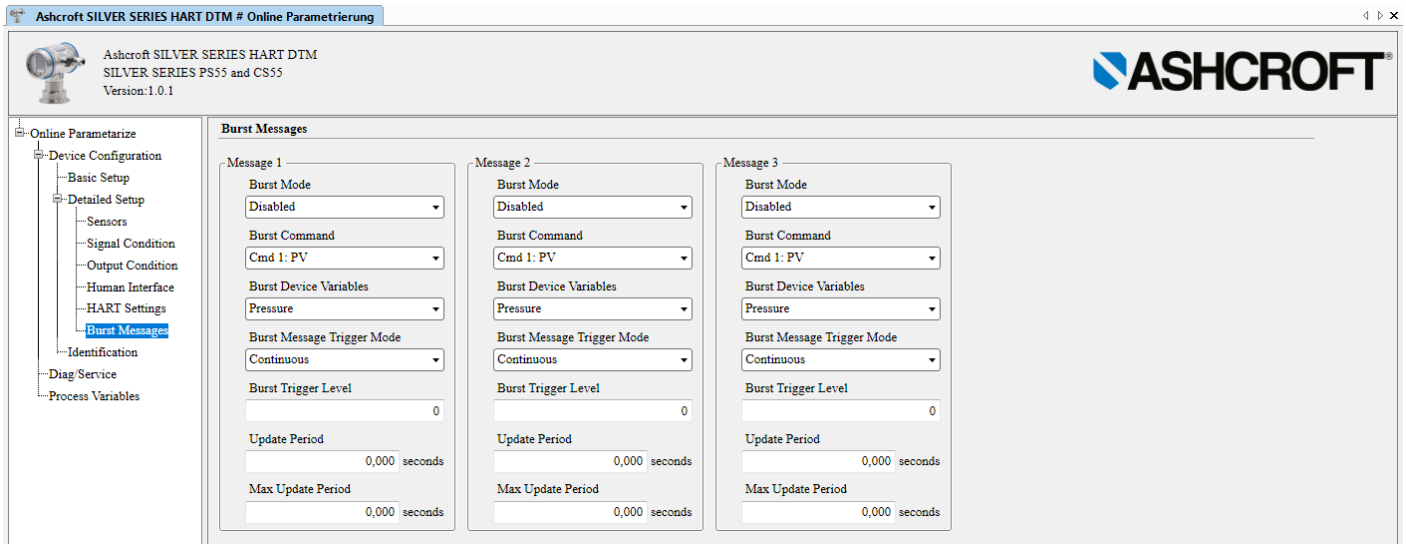
Readout: Current, Unit, Percentage, and Process Temperature.

3.6 HART settings

In this menu several HART® options can be configured. When using HART® devices in a multi-drop configuration where more than one device is in the loop, each device must be set to a different polling address. The polling address for identification to the Host device can be filled in. With the option Set Clock Time the real time clock can be set in the Field device.

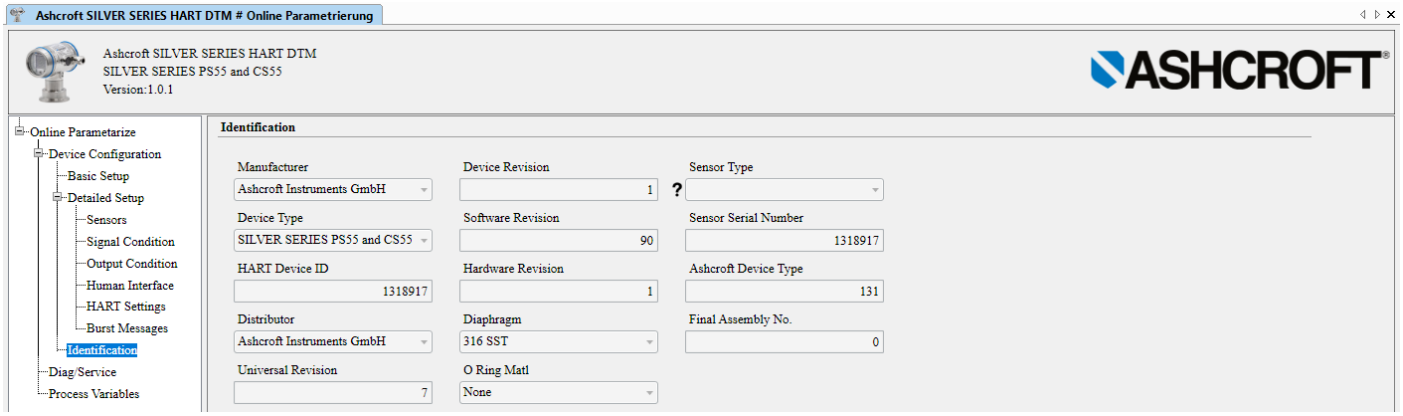
3.7 Burst messages

In this menu the transmitter can be configured for Burst mode. This will enable continuously broadcasting standard HART® reply messages. 3 (different) types of Burst messages can be configured. For a detailed explanation of the burst command, variables and message modes, details can be found in the instruction manual of the SILVER SERIES. Depending on the Master one message will continuously be broadcasted to the Master device (when enabled).



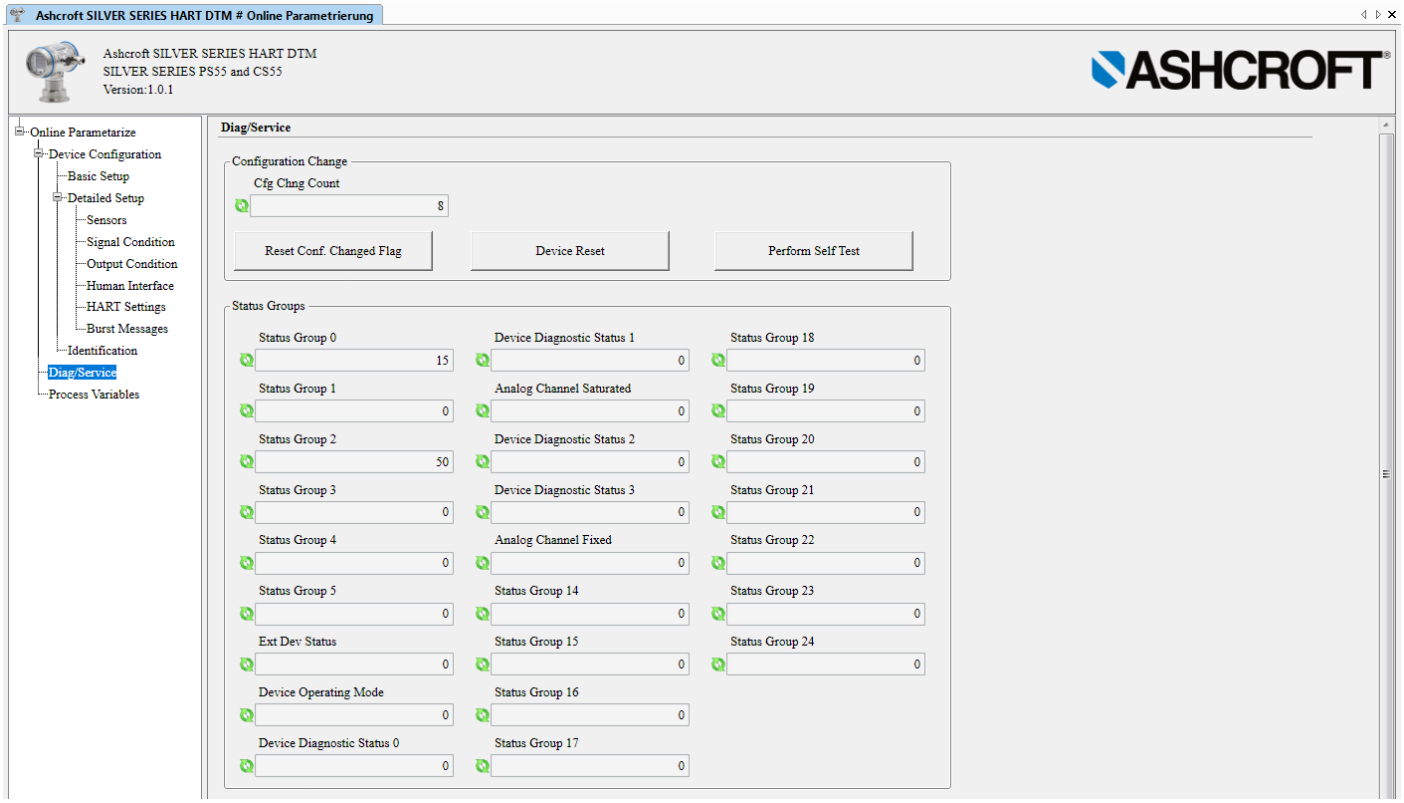
3.8 Identification

This menu shows data about the transmitter. This data is read-only and cannot be changed. The data contains information about: The manufacturer, type of transmitter, serial number, revision and others.



3.9 Diagnostics and service

Diagnostic and service contains several status bits. These flags and status bits are used by the master device. **Cfg Chng Count** displays the number configured changes. With button **Device Reset**, the transmitter will restart. With button **Perform Self-Test**, the transmitter performs a hardware self-test, follow the displayed instructions.



3.10 Process variables

In this menu the actual readings of the transmitter are displayed. The actual readings are refreshed every 10 seconds. The engineering unit of the pressure and temperature can be changed in this menu.