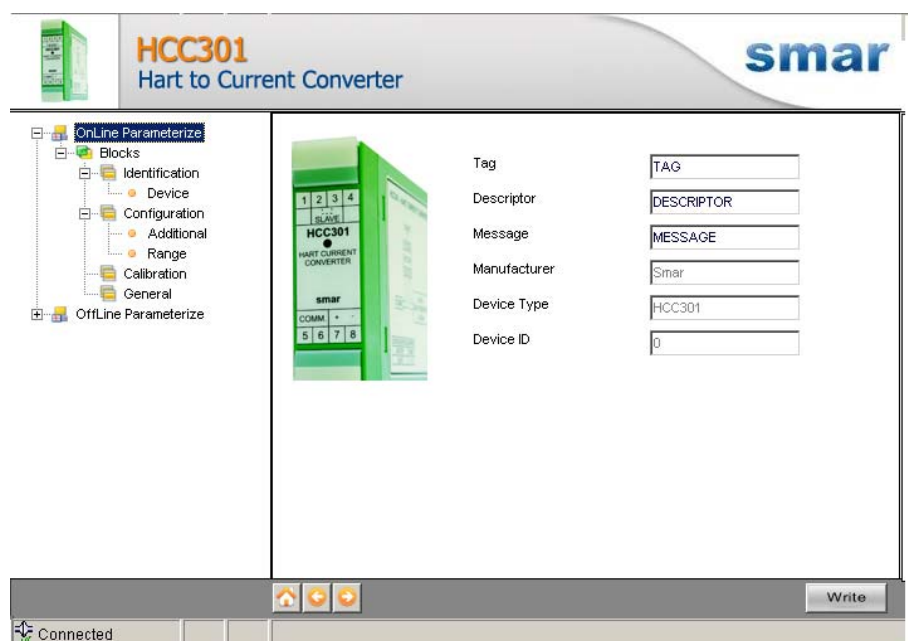


HCC301DTM - Device Type Manager



The screenshot shows the smar HCC301DTM Device Type Manager software interface. The title bar reads "HCC301 Hart to Current Converter" and the smar logo is in the top right corner. On the left, a tree view shows the "OnLine Parameterize" menu expanded, with sub-items: Blocks, Identification (Device), Configuration (Additional, Range), Calibration, and General. The main area displays a 3D model of the HCC301 device. To the right of the model is a form with the following fields:

Tag	TAG
Descriptor	DESCRIPTOR
Message	MESSAGE
Manufacturer	Smär
Device Type	HCC301
Device ID	0

At the bottom left, a status bar shows "Connected" with a green icon. At the bottom right, there is a "Write" button.





Specifications and information are subject to change without notice.
Up-to-date address information is available on our website.

web: www.smar.com/contactus.asp

INTRODUCTION

HCC301DTM is from the family of Smar's DTMs HART. With HCC301DTM is possible to have access to many functionalities of HCC301 converter:

- ✓ Converter Identification and Manufacturing Data;
- ✓ Converter Adjustment to the Working Range;
- ✓ Engineering Unit Selection;
- ✓ Device Configuration;
- ✓ Equipment Maintenance.

For further details about topics above, refer to the HCC301 manual.

TABLE OF CONTENTS

HCC301DTM	7
Pre-Requeriments	7
Installation	7
Topology.....	7
Layout.....	8
HCC301 Version	8
Communication	9
Response Code.....	9
HCC301DTM Functions	9

HCC301DTM

Pre - Requirements

The user needs to be familiar with the use of frame application FDT (Field Device Tool).

Installation

To do the HCC301DTM installation and all Smar's DTMs, run **setup.exe** from CD "**Smar Device Library**". After ending the CD-ROM installation, get into DTMs catalog from frame application to update DTMs list.

The download of installation package of Smar's DTMs can be done at <http://www.smar.com/support.asp>. The user has to do a login at site.

HCC301DTM could be integrated in all frame applications that comply with the version 1.2 of the FDT/DTM standard.

Topology

After HCC301DTM is installed and included at DTMs frame application catalog, a DTMs topology must be mounted (representing the devices physical topology).

On top must be inserted the communication DTM (responsible for communication between the computer and the first element from physical topology). The HCC301DTM is the last element of topology (represents the HCC301).

In some cases, is necessary a DTM gateway type (responsible for communication protocol conversion). The HCC301DTM could be used with Communication DTM and Gateway DTM from other manufacturers, if they comply with FDT 1.2 standard.

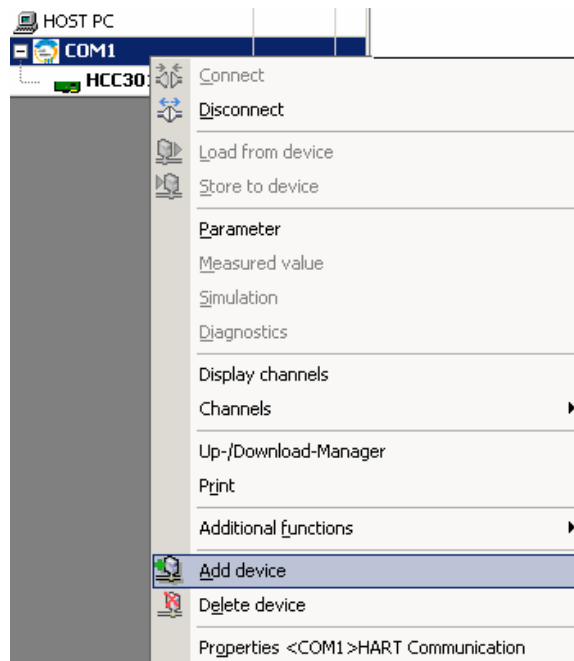


Figure 1 – “Add Device” Screen

Before changing HCC301DTM to online, verify in the topology, if the address set in HCC301DTM is the same of the HCC301 device address. If it is not, change to the correct address through the communication DTM.

While the HCC301DTM is offline (not connected), only the option **Offline Parameterize** will be enabled. After connected, will be possible to have online access to many functionalities of HCC301.

Layout

The DTM's from Smar follow a standard layout. The parameters are distributed in many screens according to its functionality. The screens can be accessed by clicking the DTM options. Every time you click an option, all the screen parameters relative to the selected option will be read from the device.

Each DTM screen with parameters that can be written has a **Write** button. When any parameter is modified, the relative field will change its color. After writing, the DTM realizes the reading of the changed parameters and updates the screen.

In the figure below, the HCC301DTM Online Parameterization navigation tree can be seen. The other options also appear.

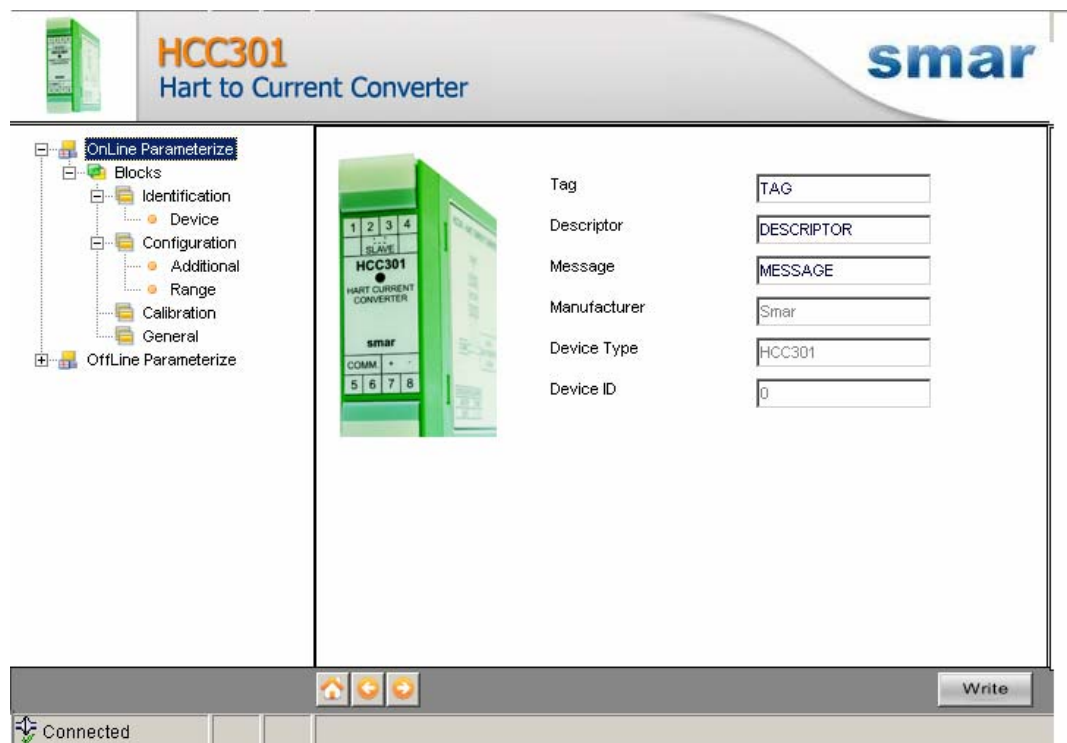


Figure 2 – HCC301DTM navigation tree

In the window's bottom part the user has access to navigation buttons . They allow go to home page, back to previous page or go to next page, respectively.

The communication status can be verified - connected or disconnected:



HCC301 Version

In case HCC301's version is previous than 1.01, possibly some parameter is not implemented and when attempting to write at this parameter, the following message will appear: "Command is not supported by the device".

Communication

HCC301DTM sends the #0 command at each 4 seconds and in case HCC301 does not answer after 2 tries, the following message will appear:

"Communication error detected. No response from device." In this case, verify if any connection is broken or if the device is off.

Is not possible read / write any parameter in case the connected equipment is not HCC301, not even the Universal Commands and Common Practice of HART protocol.

Response Code

When some writing or reading fail occurs, the HCC301DTM displays a message coming from Response Code sent by HCC301.

HCC301DTM Functions

Below we have a brief description about each HCC301DTM function.

1. **Online Parameterize** – This function is used to make the HCC301 online parameterization, is enabled when the HCC301DTM is online. The user access level for this function is "Operator" (read only) and "Maintenance" (complete access).

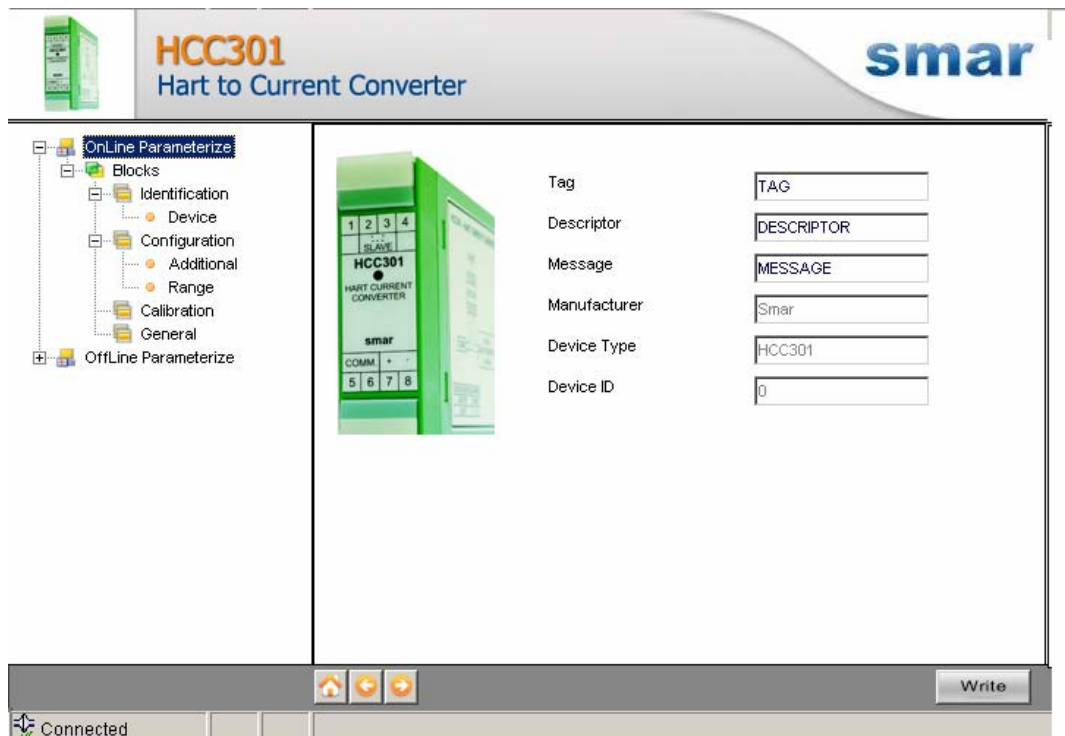


Figure 3 – HCC301DTM "Online Parameterize" Screen

2. **Offline Parameterize** - This function is used to make the HCC301 offline parameterization, the parameter values configured in this function can be written in HCC301 through the **Download** function. The user access level for this function is "Maintenance".

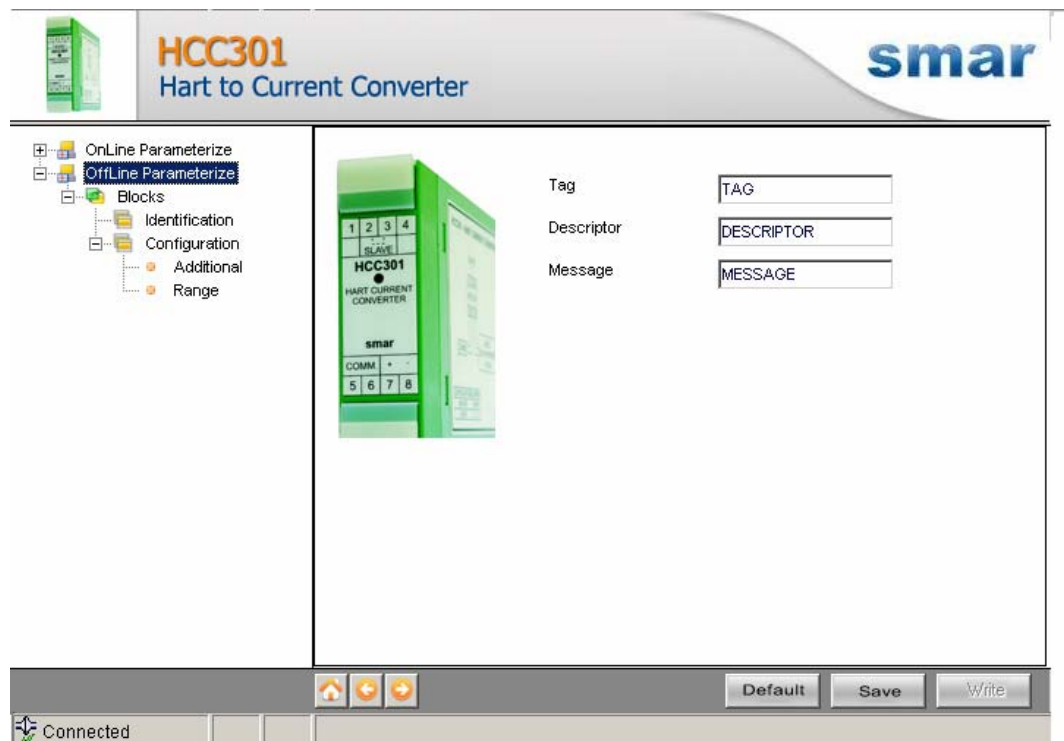


Figure 4 – HCC301DTM “Offline Parameterize” Screen

3. **Upload** - This function reads the HCC301 parameters and updates the HCC301DTM database with the recent values. This function is enabled when the HCC301DTM is online. The user access level for this function is “Maintenance”.
4. **Download** - This function writes the parameters configured in the HCC301 **Offline Parameterize** function. This function is enabled when the HCC301DTM is online. The user access level for this function is “Maintenance”.