# INTRODUCTION

The Comfort system supports integration to Velbus devices from Velleman (see www.Velbus.eu) via the UCM/Velbus module. The UCM/Velbus provides a two way interface to the Velbus network, providing the following benefits:

- Telecontrol and status monitoring through any telephone inside or outside the premises to control devices on the Velbus network.
- Allows control from Comfort Keypads, touchscreens Cytech mobile app, or other UCM interfaces like KNX, Cbus, Modbus etc or automatic scheduling using Time Programs.
- Allows any Velbus button to trigger a Response in Comfort to control any device linked to Comfort.
- Allows alarm conditions to be linked to Velbus for integration of alarm and lighting.
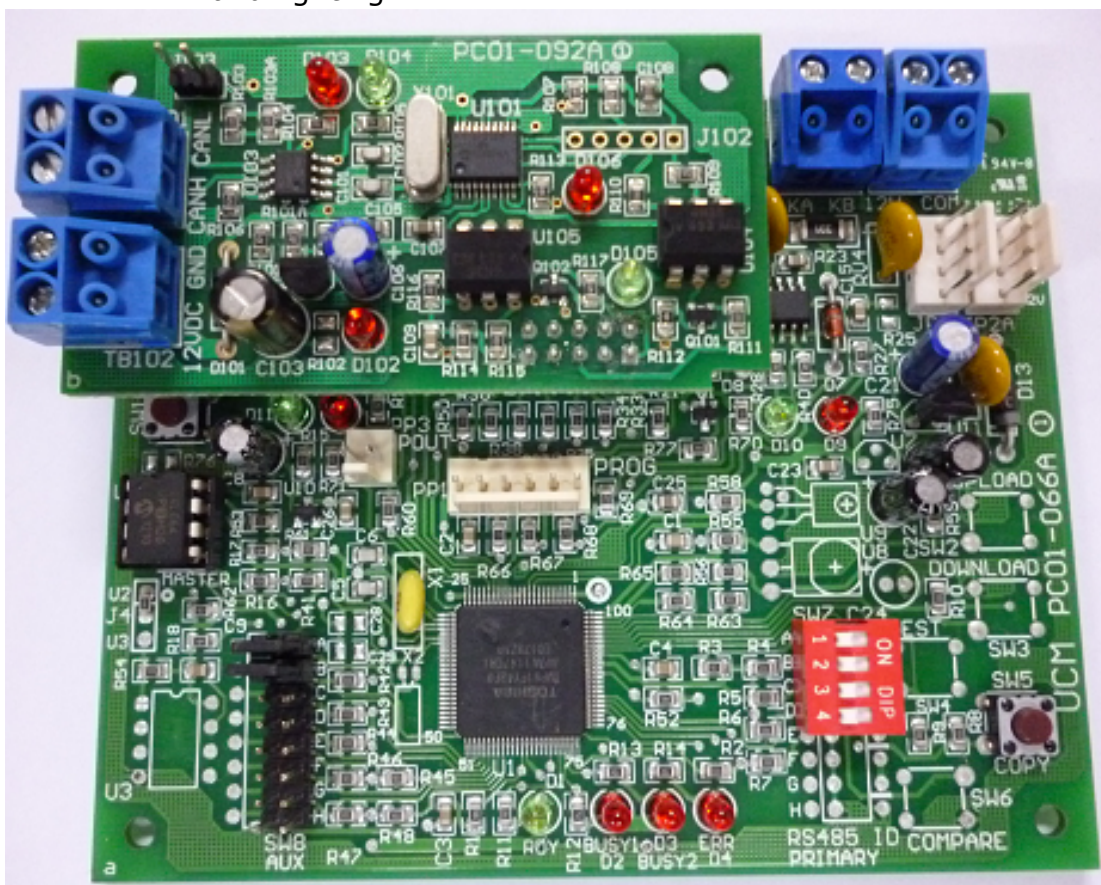
The UCM/Velbus is connected directly to the Velbus CAN bus.

Specifications

- Size 108 x 88 mm baseboard with 72 x 38 mm daughterboard
- Power supply: 12V 30 mA (supplied from Comfort)

What is included in UCM/Velbus

- UCM/Velbus module with direct connection to Velbus
- White RS485 4 way cable for connection to Comfort.

Minimum Versions

- UCM/Velbus module with firmware version "Velbus 7.006" or higher. Velbus 7.118 or above is the improved version of UCM/Velbus
- Comfort II system with firmware version "7.xxx" or above
- UCM/ETH03 or UCM/USB version 7.xxx for Comfigurator programming
- Comfigurator 3.12.12 software or above (for UCM/Velbus 7.118)

Changes in UCM/Velbus 7.118

- The Velbus modules supported by UCM/Velbus instead of being hard-coded, are based on a configuration file called velbus.cfgx Thus future velbus modules can be supported by editing the configuration file. The format of the file wil be described in this manual.

- Support for Vlebus modules increased according to Velbus Module table in this manual

- The Counter or Sensor assigned to Velbus address/Channel in the table is unique ie not duplicated in different lines of Velbus to Comfort

- Response Wizard Commands to Velbus are determined by velbus.cfg Commands="xxx" parameter

- In Monitor Mode the "Clear screen" button clears the displayed data.

- Comfigurator 3.12.12 is required for this firmware

Connections

To connect to Comfort, use either JP3 and JP4 terminal blocks with CAT5 Cable OR JP2/JP2A header with 4-way RS485 white cable if the distance is short.

- JP3 - 12V/COM terminal block. Connect to 12V/COM on Comfort using CAT5 cable if JP2/2A not used. Do not connect if JP2/2A is used to connect to Comfort JP3 and JP4 are used instead of JP2/JP2A
- JP4 - KA/KB terminal block. Connect to KA/KB using CAT5 cable if JP2/2A not used. Do not connect if JP2/2A is used to connect to Comfort.
- JP2 and JP2A - 4 way headers (12V/COM/KA/KB). Either connector can be connected to Comfort's J6 RS485 header via the supplied white 4 way cable if JP3 and JP4 are not used. This plug-in cable connection is used when the distance between the controller and Velbus interface is less than 10 cm. For longer distances, use the JP3 and JP4 terminal blocks.

On Velbus Submodule

- TB101 - CANH / CANL - Connectors for Velbus Data Bus. Observe Polarity.
- TB102 - 12VDC/GND - Connection to the Velbus 12V power supply. Do not connect to the Comfort 12V power supply as the two power supplies should be isolated from each other
- J103 Header- Insert a shunt to add a terminating resistor to Velbus. A terminator should normally be added to the furthest module on the Velbus. Please consult Velbus manuals regarding where to insert Terminators.

ICs

- U1 - Microcontroller IC. Label indicates the firmware version number "Velbus 7.XXX"
- U5 - RS485 Interface to Comfort
- U2 - EEPROM for Configuration settings

Jumper Settings

- J103 header - see On Velbus Submodule above.

Button

- SW1 - RESET. This button reinitialises the UCM/Velbus module. It does not change any parameters in Velbus.
- COPY - Press and hold to change ID if SW7 shunts are all off.

LED Indicators

- D1 "RDY" (Green) – should be on at all times
- D2 "BUSY1" (Red) – indicates when processing incoming data string

- D3 "BUSY2" (Red) – indicates when sending outgoing data string
- D4 "ERR" (Red) – error indicator flashes when no EEPROM in U2
- D9 (Red) – RS485 Transmit to Comfort
- D10 (Green) – RS485 Receive from Comfort
- D11 (Green) - indicates incoming data string from Velbus
- D12 (red) - indicates outgoing data string from ComfortD102 (Red) on Velbus Submodule - Power from Velbus

On Velbus Submodule

- D103 (Red) - UCM Data converted > Transmit Data to Velbus
- D104 (Green) - Receive Data from Velbus
- D105 (Green) - Data from UCM
- D106 (Red) - Converted Data from Velbus to UCM

These LEDs are for diagnostic purposes. Data from Velbus will cause D104 (Green) to blink. D106 (Red) also blinks indicating that the data has been converted to serial data to be sent to the UCM. Busy1 on the UVCM Baseboard also blinks as data is sent to Comfort

When Comfort sends data to Velbus, BUSY2 will blink, D105 (Green) blinks to indicate data to the Velbus submodule, D103 (red) also blinks indicating converted data sent to Velbus.

The UCM is electricallly isolated from Velbus.

UCM ID Setting

Comfort is able to support up to 8 UCMs. SW7 is a set of 4 DIP switches which determines the UCM ID, according to the table below:

ID	SW7-1	SW7-2	SW7-3	SW7-4
1	On	On	On	On
2	Off	On	On	On
3	On	Off	On	On
4	Off	Off	On	On
5	On	On	Off	On
6	Off	On	Off	On
7	On	Off	Off	On
8	Off	Off	Off	On
COPY Button	**Off**	**Off**	**Off**	**Off**

Press RESET button on the UCM/Velbus after changing the ID settings by shunts. It is not necessary to reset if using the COPY Button.

Another way of setting ID is when all SW7 1 to 4 are all in the OFF position.

Press and hold the COPY button for 2 seconds until the LEDs change state to the next ID, e.g. ID=2 or BUSY1 only is on. Press and release to increment the ID until 8 and then back to 1. If the COPY button is not pressed for 4 seconds, the new ID is confirmed and all LEDs will momentarily turn on. If any SW7 switch is ON, the COPY button will not work. The table below shows the how the ID is displayed on the 4 LEDs when the COPY button is pressed.

ID	RDY (D1)	BUSY1(D2)	BUSY2(D3)	ERR (D4)
1	**On**	Off	Off	Off
2	Off	**On**	Off	Off
3	**On**	**On**	Off	Off
4	Off	Off	**On**	Off
5	**On**	Off	**On**	Off

6	Off	**On**	**On**	Off
7	**On**	**On**	**On**	Off
8	Off	Off	Off	**On**
None	**On**	**On**	**On**	**On**

It is important that no two UCMs have the same ID as this will cause both UCMs to lose communications.

By convention, ID=1 is reserved for reading/writing configuration file. The UCM/Velbus should be set to ID 2 or above so that any RS485 communications failure can be reported by Comfort.

Check the D9 (red) and D10 (green) LEDs are both blinking as this shows that the UCM is communicating with Comfort. If D9 does not blink it indicates that Comfort does not poll this ID. This must be fixed by Scanning Modules as described in the next section.

GETTING STARTED

Setup

- Ensure that the Velbus network has already been set up using VelbusLink software. Refer to Velbus equipment installation and set-up instructions.

- Before connecting to Comfort, set the ID of UCM/Velbus according to the previous section and according to the number of other UCMs in the Comfort Bus.

- Connect the UCM/Velbus to Comfort via the supplied 4 way white cable from the 4 pin header JP2/JP2A to Comfort's RS485 header.

- Upon plugging in the 4 way cable, the red ERR LED will be lit temporary for a few seconds. After that only the Green RDY LED on the UCM (D1) will stay on.

- If the ERR LED is flashing, check that there is EEPROM on U2 IC socket and it is in the correct orientation.

- The LEDs D9 (red) and D10 (green) should blink rapidly showing that RS485 communications has been established between Comfort and the UCM. D10 (green) flashing shows that it is receiving communications from Comfort (poll). D9 (red) comes on when the UCM responds to a poll from Comfort. Connect the TB101 and TB102 terminals on the Velbus submodule to Velbus CANH, CANL, 12V, GND.

Configuring UCM/Velbus with Comfigurator

Adding a UCM/Velbus

Click the Modules tab on the top left pane of Comfigurator. In Modules, right-click on the UCM folder. Select SCAN for UCMs. Enter your user code in the login box. The Scan results are shown below (typical). The Velbus UCM should be shown in the UCMs list.

As an alternative to the Scan method, if the UCM/Velbus is not connected yet, right-click the Modules Tab and select Add UCM. Select UCM Type on the UCM Properties window as Velbus.
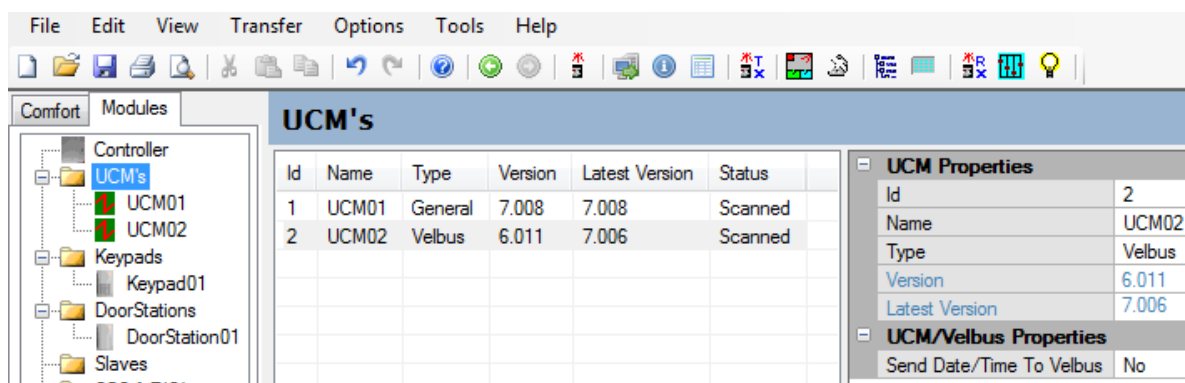
Clicking on the UCM icon on the left Panel corresponding to Velbus in the above image will show the Velbus configuration screen.

Velbus Menu

In the Velbus Configurator screen above, the Velbus Configurator menu has Write to EEPROM, Read from EEPROM, Reset to Default, Get Module Status.

Write to EEPROM

Write the configuration to the UCM/Velbus EEPROM. This is necessary after creating or editing the counter/sensor assignments. A reset of the UCM/Velbus will be done automatically after writing. Write to EEPROM does NOT change the learned Velbus properties, it affects only the Counter and sensor assignments.

Remember that a WRITE to EEPROM operation which programs the UCM/Velbus, is not the same as WRITE to Comfort, which writes configuration to Comfort which programs the U4 EEPROM in Comfort.

Read From EEPROM

This reads the Velbus configuration and Counter and sensor assignment from the UCM/Velbus EEPROM . Read from EEPROM is automatically performed after a Learn operation

Reset To Default

This resets the UCM/Velbus to Factory Default including the Velbus properties and Counter assignments. It does not write the blank configuration to EEPROM

Get Module Status

This button causes the status of the Velbus module to be displayed on the bottom status bar which is very useful for testing and troubleshooting. The possible status information includes;

- "Normal/No error"
- "EEPROM missing/faulty" - This is the U2 EEPROM on the UCM/Velbus
- "EEPROM insufficient capacity" - wrong U2 EEPROM may be inserted.
- "EEPROM data invalid"
- "Communication error between UCM baseboard and sub-module"

Velbus Tabs

There are 3 tabs below the menu; UCM/Velbus Properties, Velbus to Comfort and Monitor Mode.

UCM Properties shows the UCM ID, name, Type as Velbus and the UCM/Velbus current and latest firmware version.
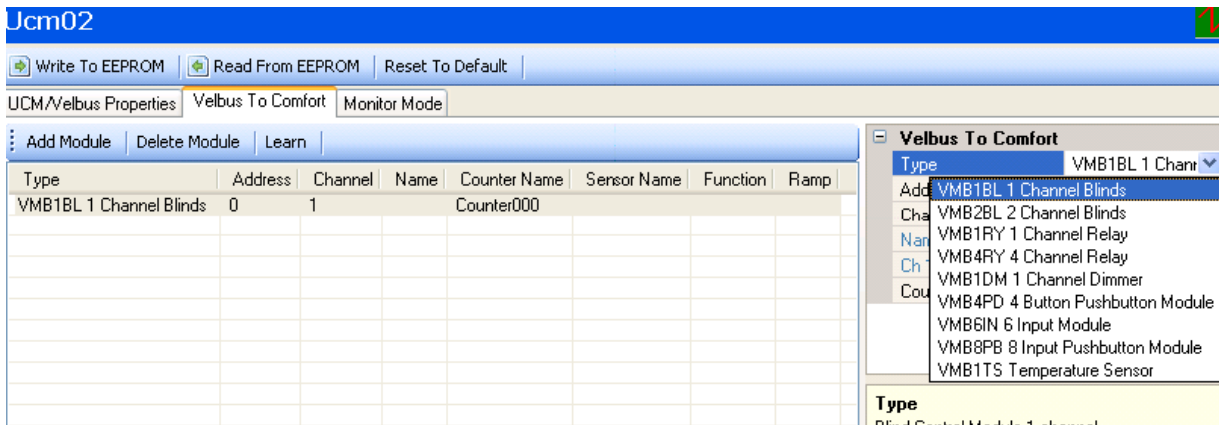
In UCM/Velbus Properties, Send Time to Velbus should be set to 'Yes' if Comfort time is to be sent to the Velbus time module and 'No' if Comfort time is not to be sent to Velbus.

The Velbus to Comfort screen is where most of the work is to be done

The above shows the initial screen. The Add Module button allows you to add a Velbus module to the configuration.

A drop-down list as shown above will allow the selection of the known Velbus modules.

Currently the following Velbus module types are supported;

UCM/Velbus: Comfort to Velbus Interface

Module	Name	Type
VMB8PB	8 chan Pushbutton	0x01
VMB1RY	Relay 1 chan	0x02
VMB1BL	Blind Control 1 chan	0x03
		0x04
VMB6IN	6 channel Input	0x05
		0x06
VMB1DM	Dimmer 1 chan	0x07
VMB4RY	Relay 4 chan	0x08
VMB2BL	Blind Control 2 chan	0x09
VMB8IR	IR Receiver	0x0A
VMB4PD	4 button Timer Panel	0x0B
VMB1TS	Temp Sensor 1 chan	0x0C
VMB1TH		
VMB1TC	Temp Controller 1 chan	0x0E
VMB1LED	PWM LED Dimmer	0x0F
VMB4RYLD	Relay 4 ch Voltage Out	0x10
VMB4RYNO	Relay 4 ch N/O	0x11
VMB4DC	0-10V Dimmer 4 chan	0x12
VMBDME	Dimmer for Electronic/Resistive loads	0x14
VMBDMI	Dimmer for Resistive/Inductive Loads	0x15
VMB8PBU	8 channel Pushbutton	0x16
VMB6PBN	Push Button Module Niko 6 Button	0x17
VMB2PBN	Push Button Module Niko 2 Button	0x18
VMB6PBB	Push Button Module 6 Button	0x19
VMB4RF	4 Channel RF receiver	0x1A
VMB1RYNO	Relay 4 ch N/O	0x1B
VMB1BLE	1 channel Blinds Control	0x1C
VMB2BLE	2 channel Blinds Control	0x1D
VMBGP1	1 Button Glass Panel	0x1E
VMBGP2	2 Button Glass Panel	0x1F
VMBGP4	4 Button Glass Panel	0x20
VMBGP0	0 Button Glass Panel	0x21
VMB7IN	7-channel Input	0x22
VMBGPOD	32-channel Touch Panel OLED	0x28
VMB1RYNOS	1-channel Relay N/O	0x29
VMBPIRM	Mini PIR Detector	0x2A
VMBPIRC	Ceiling PIR Detector	0x2B
VMBPIRO	Outdoor PIR Detector	0x2E
VMB1BLS	1-channel Blind	0x31
VMB4AN	4-channel Analog I/O	0x32

Note that not all functions of each module may be supported by UCM/Velbus

For each module, related parameters like Address (0 to 254), Channel (for multichannel devices) must be entered, as in the screenshot below

The Module Name cannot be entered manually.

Rather than manually adding each module, there is a much easier method, namely the Learn Mode. This gets the required information from the Velbus network for each module, including the address, channel, and assigned name, that have been configured using the Velbus Link software, thus saving a lot of time and preventing mistakes.

Press the Learn Button. Red BUSY2 LED (D3) will be turned on and red BUSY1 LED (D2) will be flashing every few seconds. The Learning process may take a few minutes depending on the size of the Velbus network. The screenshot below shows a typical screen after the Learn process and assignment of counters and sensors. After the Learn process, the counters and sensors are not assigned yet and will show Counter255 or Sensor255 be default.

Selecting any module will bring up the properties of the module on the right pane. Assign a counter or sensor (in the case of the temperature sensor module) to the Velbus device for each channel.

The maximum number of channels that can be identified during Learn Mode is 512. However only 255 channels can be mapped to Comfort counters and 32 to Comfort sensors.

Output Modules

Typical Output modules are;

- VMB1BL Blind Control 1 Channel
- VMB2BL Blind Control 2 Channel
- VMB1RY Relay 1 Channel
- VMB4RY Relay 4 Channel
- VMB1DM Dimmer 1 Channel
- VMB1LED - Professional LED Dimmer Module
- VMB4RYLD - Programmable 4 channel Voltage Out Relay Module
- VMBRYNO - Programmable 4 channel Relay Module
- VMB4DC - 4 channel 0 (1) to 10V Output Controller
- VMB4DME - Dimmer for Electronic/ Resistive Load

UCM/Velbus allows the status of all channels in these modules to be sent to Comfort and to be announced in the Home Control Menu as well as to trigger other actions based on the status.

A counter can be assigned to the device by selecting Counter Name to show a drop-down menu of Counters in the system. Select a counter to be assigned to the Velbus device for monitoring. The purpose of assigning counters to each channel in a module is to allow Comfort to know the status of the channel via the mapped counter, i.e. whether it is on, off or at an intermediate level. When the status of a Velbus module changes, the corresponding counter in Comfort is updated. This also activates a Counter Response associated with that counter which can be programmed to perform any series of actions in Comfort.

The assigned counter will be updated with the value 0 to 255 of the Velbus device, where 0 means off, 255 means ON, and 1 to 99 means a dimming level for lighting devices. The Control Menu can be used to monitor the status of the Velbus device by selecting Feedback Type = Counter and selecting the Counter assigned, as shown in the next page.

In the example below, the Control Menu is programmed to announce;

0 for All, 1 for Light 1, 2 for Light 2, 3 for Light 3...

When 2 for Light 2 is selected, the voice menu announces "Light 2 is" On or Off depending on whether Counter 012 value is 0 or 255.

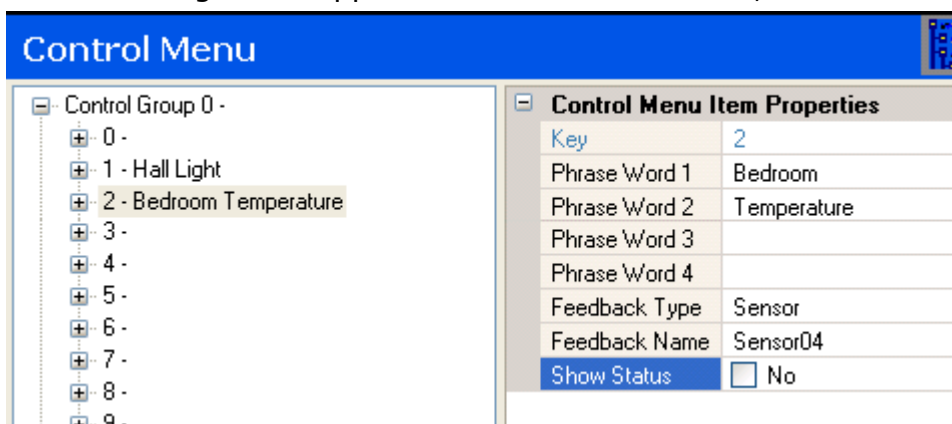## Temperature Sensor Module

- VMB1TS - Temperature sensor
- VMB1TC - Temperature Controller

For the Temperature Sensor Module VMB1TS, a Sensor is mapped so that the temperature in degrees C is saved in the assigned Sensor.
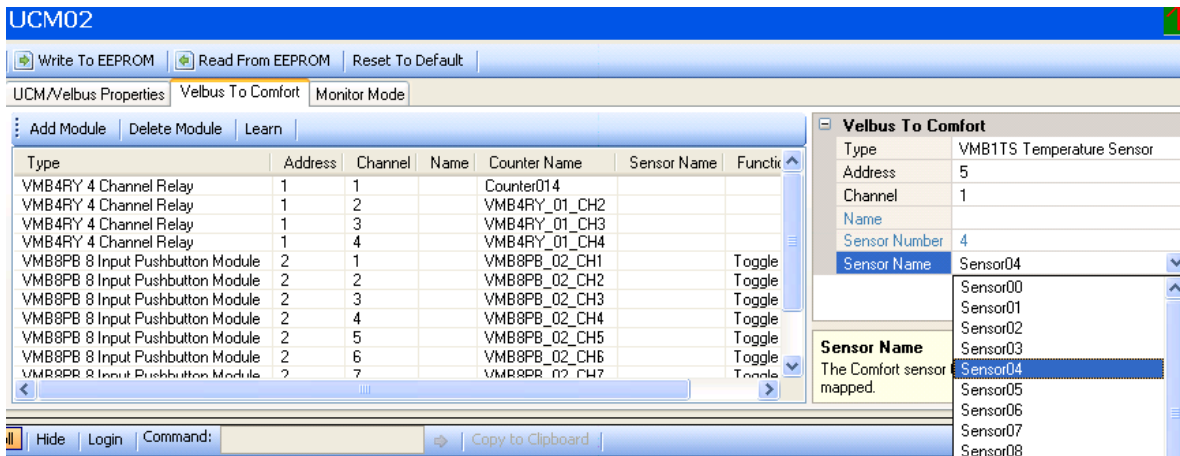
The temperature can be announced as feedback on the Control Menu by selecting Feedback Type as Sensor and selecting the Feedback Name as the Sensor Register mapped to the VMB1TS module, as shown below.

When a sensor Register is updated with a new value from Velbus, it also activates a Sensor Response, as shown below. The Sensor Response can be used to perform other actions based on the temperature, for example announce the temperature in degrees, or control air conditioner or heating based on the temperature.
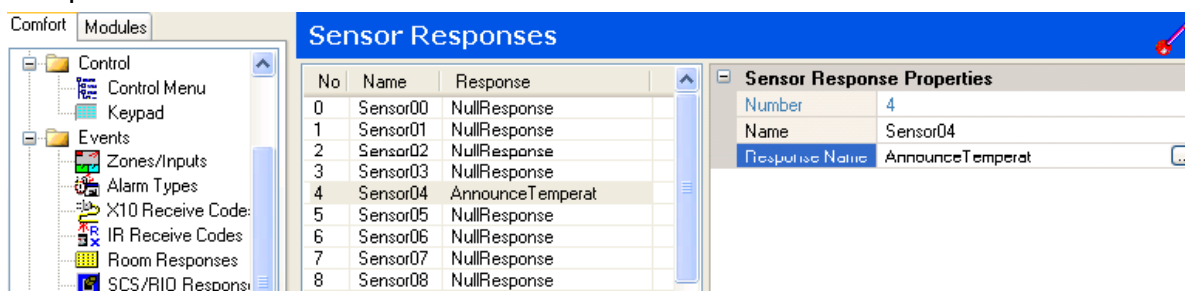
Input Modules

Some typical Input Modules are

- VMB4PD - Timer Panel 4 Button
- VMB6IN - Input 6 Channel
- VMB8PB - Push Button 8 Channel
- VMB4PD - 4 button Pushbuton Module

- VMB6IN - 6 input Module
- VMB8PB - 8 button Pushbutton Module

Input Modules can have their buttons programmed to control anything within Comfort.

For input modules, two additional fields Function and Ramp are seen. This determines the function of the Velbus button for Comfort. The possible functions are 0 = None, 1 = Toggle, 2 = Scene, 3 = Dim Up, 4 = Dim Down, 5 = Dim Toggle.
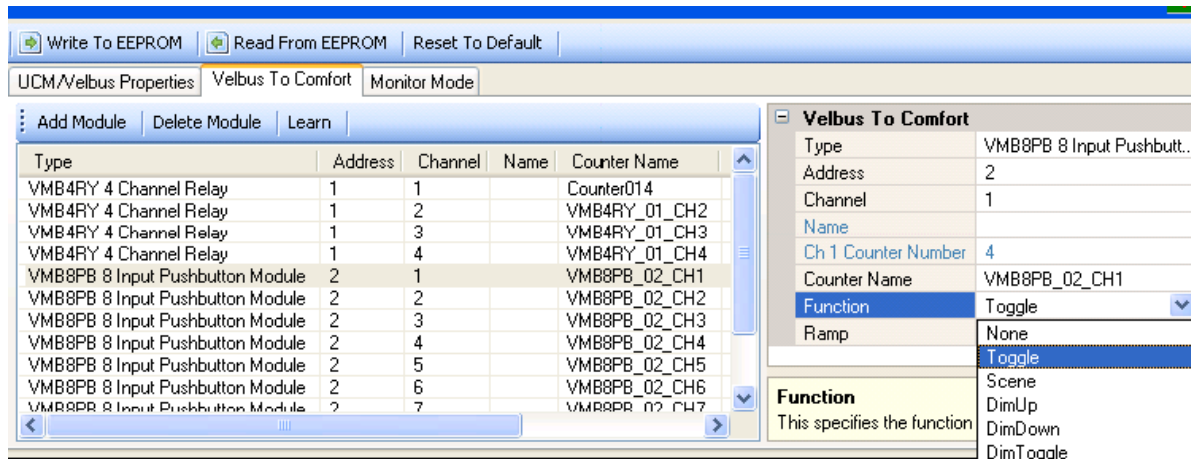
Toggle means that the button toggles between On and Off states and will send alternate Off (0) and ON (255) values to the assigned counter.

Scene means that each button press will send an ON (255) value to the assigned counter

Dim Up means that when the Velbus button or input is pressed and held, the existing counter value will be incremented every second according to the **ramp time** e.g. steps each second = 256/seconds. If the button is pressed and released in less than 0.85 seconds, the ON command (255) will be sent only.

Dim Down means that when the Velbus button or input is pressed and held, the existing counter value will be decremented every second according to the **ramp time** e.g. steps each second = 256/seconds. If the button is pressed and released in less than 0.85 seconds, the OFF command (0) will be sent only.

Dim Toggle means that when the Velbus button or input is pressed and held, the existing counter value will be alternately incremented or decremented every second according to the **ramp time** e.g. steps each second = 256/seconds. If the button is pressed and released in less than 0.85 seconds, the ON (255) or OFF command (0) will be sent alternately.

Writing and Reading to EEPROM

When the Velbus configuration is complete, i.e. the Velbus network has been learned and counters and sensors assigned, the next step is to Write to EEPROM

Monitor Mode

In Monitor Mode, the received messages from Velbus are displayed in the Monitor Window. This is a good tool for debugging the Velbus connection or checking the Velbus communications. However, it does not show the

commands sent to Velbus from Comfort. In Comfigurator 3.12.12 a "Clear Screen" button clears the monitor screen.

Sending Commands to Velbus

For an understanding of the Velbus concepts, please refer to the appropriate Velbus documentation. It is beyond the scope of this manual to provide details of Velbus operation and programming.

Comfort can be programmed to send commands to the Velbus devices through the Comfigurator Response Wizard.

The Response Wizard – Sending Commands to Velbus

The Comfigurator Response Wizard helps to program the Actions which make up a Response to control Velbus devices. Select Events -> Responses -> Add Response to create a new Response, as shown in the following diagram:

Enter the Description of the new Response. The Name is automatically created from the Description.

Click OK. The Response Wizard dialogue will appear. Click Append New Action and select UCM > Velbus.
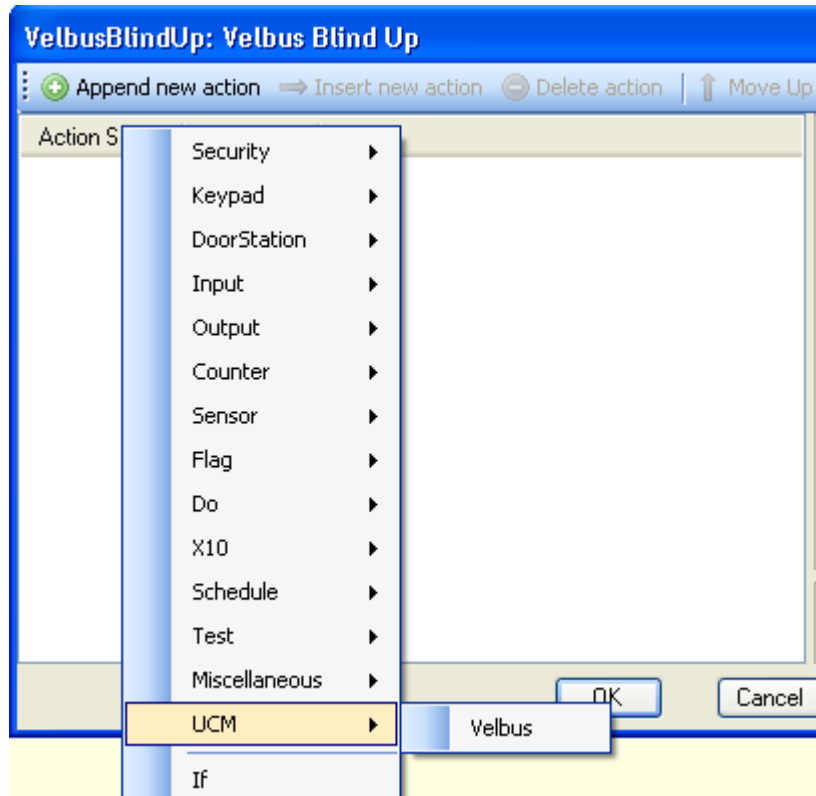
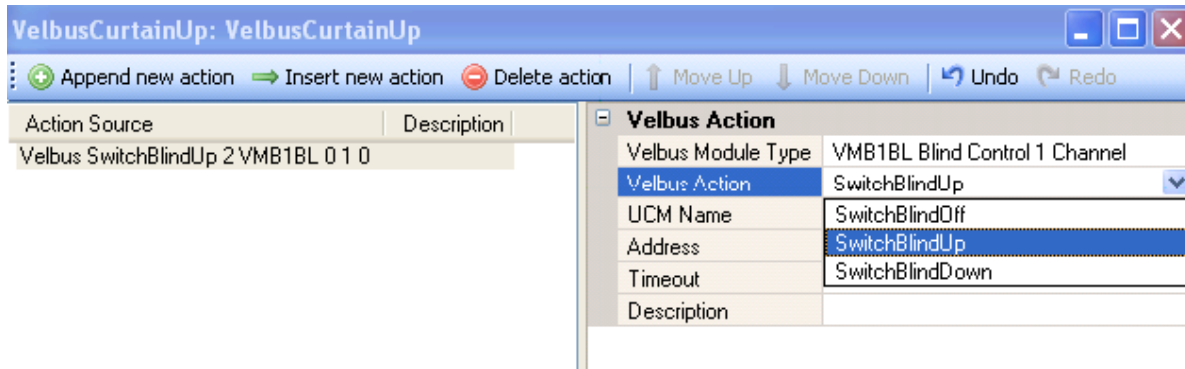

The Velbus action dialogue appears as shown below. Select the Velbus module type from the drop down list;
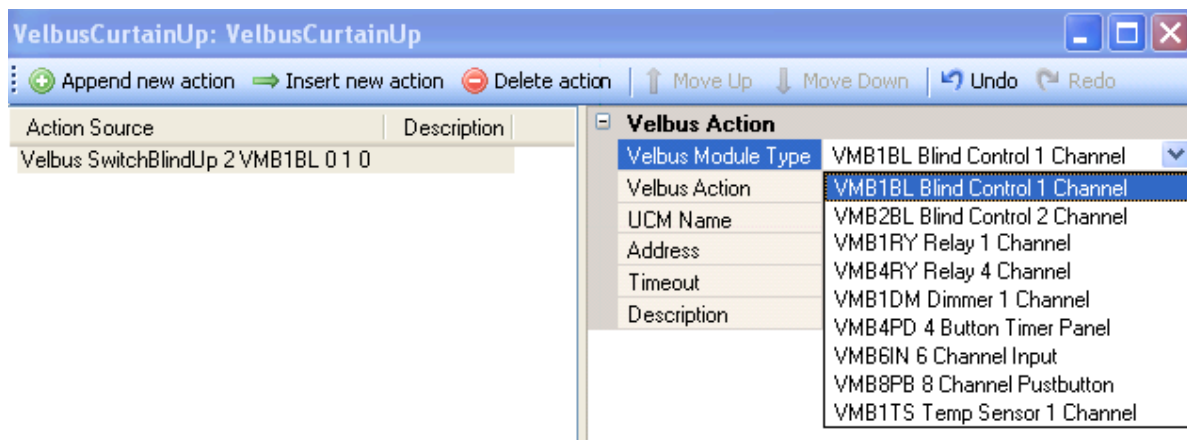
Next select the action from the drop down list which shows the applicable commands depending on the module type;

Select the Velbus Address and Time-out for the module. Note that the correct Address must be entered, which is not selected automatically from the Velbus to Comfort learned properties.

The new Response can be assigned to a Comfort Event, e.g. Control Menu, Time Program, Zone Response, Alarm Response, IR Received Response etc. so that any Comfort event can control any Velbus Device.

In the screenshot example below, the control menu is programmed for Curtain control, 3 for Bedroom Curtain, 1 for Up, executing Response VelbusCurtainUp.
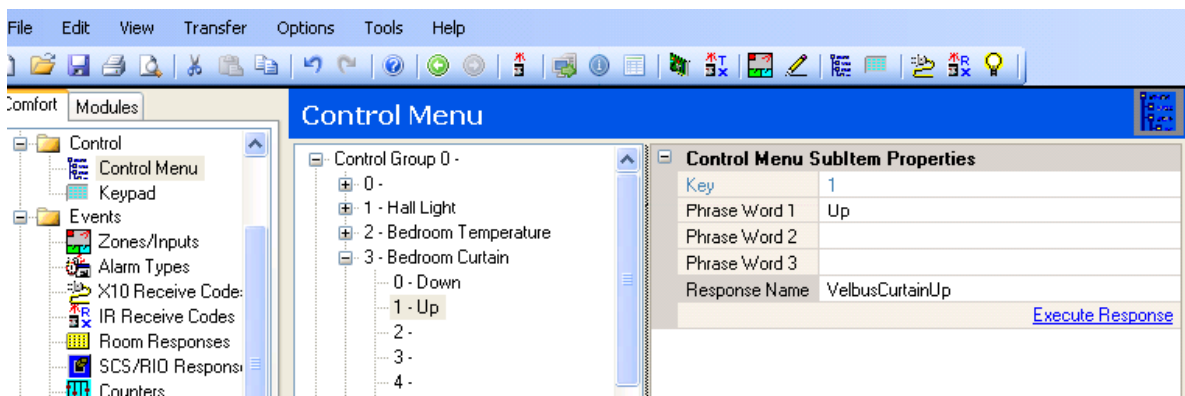
The status of the curtain i.e. whether Up or down can be announced in the Control Menu by selecting Feedback Type as Counter, and Counter Name as the Counter mapped to the VMB1BL Velbus module and channel.

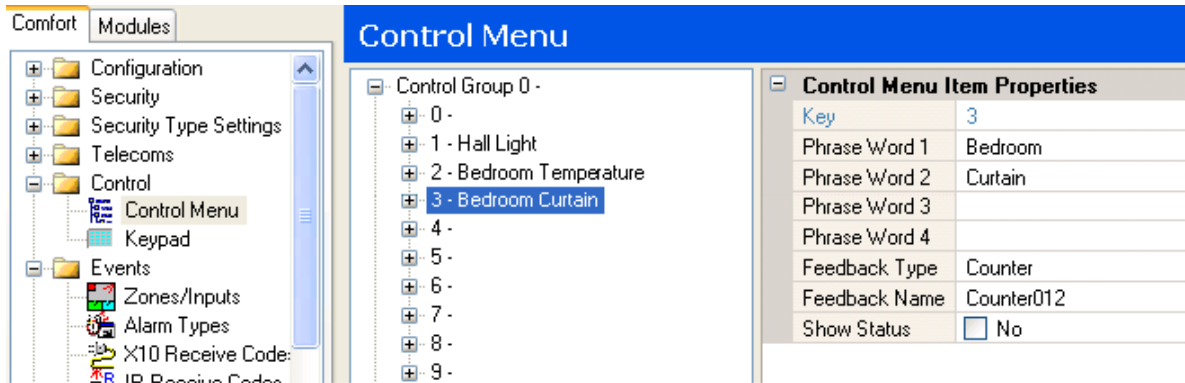The Velbus actions command are in the following categories;

- None
- Blinds
- Relays
- Inputs
- Dimmers
- Temperature Sensor

The velbus.cfgx file gives the Command camegory in the Commands="xxx" field

eg If the velbus module has Relay commands category then the Relay Commands are applicable to it

If Commands="None" then no commands are applicable to the Velbus module

Format of "velbus.cfgx" file

Location of the file is in ..\Comfigurator\Config

<VelbusTypes>

    <VelbusType Type="0x01" Name="VMB8PB 8-channel Push Button" Channels="8" Register="Counter" Functions="yes" Commands= "Input"/>

    <VelbusType Type="0x02" Name="VMB1RY 1-channel Relay" Channels="1" Register="Counter" Functions="no" Commands= "Relay"/>

    <VelbusType Type="0x03" Name="VMB1BL 1-channel Blind Control" Channels="1" Register="Counter" Functions="no" Commands= "Blinds"/>

    <VelbusType Type="0x05" Name="VMB6IN 6-channel Input" Channels="6" Register="Counter" Functions="yes" Commands="Input"/>

    <VelbusType Type="0x07" Name="VMB1DM 1-channel Dimmer" Channels="1" Register="Counter" Functions="no" Commands= "Dimmer"/>

    <VelbusType Type="0x08" Name="VMB4RY 4-channel Relay" Channels="4" Register="Counter" Functions="no" Commands="Relay"/>

    <VelbusType Type="0x09" Name="VMB2BL 2-channel Blind Control" Channels="2" Register="Counter" Functions="no" Commands= "Blinds"/>

    <VelbusType Type="0x0B" Name="VMB4PD 4-channel Timer" Channels="4" Register="Counter" Functions="no" Commands="Input"/>

    <VelbusType Type="0x0C" Name="VMB1TS 1-channel Temperature Sensor" Channels="1" Register="Sensor" Functions="no" Commands="Temperature"/>

    <VelbusType Type="0x0E" Name="VMB1TC 1-channel Temperature Controller" Channels="1" Register="None" Functions="no" Commands="None"/>

    <VelbusType Type="0x0F" Name="VMB1LED 1-channel PWM LED Dimmer" Channels="1" Register="Counter" Functions="no" Commands="Dimmmer"/>

    <VelbusType Type="0x10" Name="VMB4RYLD 4-channel Relay" Channels="4" Register="Counter" Functions="no" Commands="Relay"/>

    <VelbusType Type="0x11" Name="VMB4RYNO 4-channel Relay N/O" Channels="4" Register="Counter" Functions="no" Commands="Relay"/>

    <VelbusType Type="0x12" Name="VMB4DC 4-channel 0-10V Dimmer" Channels="4" Register="Counter" Functions="no" Commands= "Dimmer"/>

    <VelbusType Type="0x14" Name="VMBDME Dimmer for Resistive Loads" Channels="1" Register="Counter" Functions="no" Commands="Dimmer"/>

    <VelbusType Type="0x15" Name="VMBDMI Dimmer for Inductive Loads" Channels="1" Register="Counter" Functions="no" Commands="Dimmer"/>

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    <VelbusType Type="0x16" Name="VMB8PBU 8-channel Pushbutton" Channels="8" Register="Counter"
Functions="yes" Commands="Input"/>

    <VelbusType Type="0x17" Name="VMB6PBN 6-channel Niko Pushbutton" Channels="6"
Register="Counter" Functions="yes" Commands="Input"/>

    <VelbusType Type="0x18" Name="VMB2PBN 2-channel Niko Pushbutton" Channels="2"
Register="Counter" Functions="yes" Commands="Input"/>

    <VelbusType Type="0x19" Name="VMB6PBB 6-channel Pushbutton" Channels="6" Register="Counter"
Functions="yes" Commands="Input"/>

    <VelbusType Type="0x1B" Name="VMB1RYNO 1-channel Relay N/O" Channels="1" Register="Counter"
Functions="no" Commands="Relay"/>

    <VelbusType Type="0x1C" Name="VMB1BLE 1-channel Blind Control" Channels="1" Register="Counter"
Functions="no" Commands="Blinds"/>

    <VelbusType Type="0x1D" Name="VMB2BLE 2-channel Blind Control" Channels="2" Register="Counter"
Functions="no" Commands="Blinds"/>

    <VelbusType Type="0x1E" Name="VMBGP1 1-button Glass Panel" Channels="1" Register="Counter"
Functions="yes" Commands="Input"/>

    <VelbusType Type="0x1F" Name="VMBGP2 2-button Glass Panel" Channels="2" Register="Counter"
Functions="yes" Commands="Input"/>

    <VelbusType Type="0x20" Name="VMBGP1 4-button Glass Panel" Channels="4" Register="Counter"
Functions="yes" Commands="Input"/>

    <VelbusType Type="0x21" Name="VMBGPO Touch Panel OLED" Channels="1" Register="None"
Functions="no" Commands= "None"/>

    <VelbusType Type="0x22" Name="VMB7IN 7-channel Input" Channels="7" Register="Counter"
Functions="yes" Commands="Input"/>

    <VelbusType Type="0x28" Name="VMBGPOD 32-channel Touch Panel OLED" Channels="32"
Register="Counter" Functions="yes" Commands="Input"/>

    <VelbusType Type="0x29" Name="VMB1RYNOS 1-channel Relay N/O" Channels="4" Register="Counter"
Functions="no" Commands="Input"/>

    <VelbusType Type="0x2A" Name="VMBPIRM Mini PIR Detector" Channels="4" Register="Counter"
Functions="no" Commands="Input"/>

    <VelbusType Type="0x2B" Name="VMBPIRC Ceiling PIR Detector" Channels="1" Register="Counter"
Functions="no" Commands="Input"/>

    <VelbusType Type="0x2C" Name="VMBPIRO Outdoor PIR Detector" Channels="1" Register="Counter"
Functions="no" Commands="Input"/>

    <VelbusType Type="0x2E" Name="VMB1BLS 1-channel Blind" Channels="1" Register="Counter"
Functions="no" Commands= "Blinds"/>

    <VelbusType Type="0x31" Name="VMBMETEO Meteo Station" Channels="1" Register="None"
Functions="no" Commands="None"/>

    <VelbusType Type="0x32" Name="VMB4AN 4-channel Analog I/O" Channels="4" Register="None"
Functions="no" Commands="None"/>

</VelbusTypes>
```

Parameters of the velbus.cfgx file are deifned below;

Type: This is the Velbus Type in hex. The module type is used to look up the velbus.cfgx file to obtain its parameters.

Name: This is the Name of the Velbus module obtained from Learn. This name is displayed in each line of the Velbus to Comfort screen

Channels: This is the number of channnels for this Velbus Type, eg 4 means there are 4 channels

Register: This is the Register either Counter or Sensor which is mapped to Comfort. Other Register Types may be included in future. Eg if Register = "Counter" then the channel on that line is mapped to a Counter, and Comfigurator will allow a Counter number to be mapped to the velbus channel. If Register= "None" it means that this Velbus type will not be mapped to a Comfort Register. It is shown only for identification and only 1 channel is displayed in Velbus to Comfort even if the type has many channels.

Functions: If "yes" that means the parameters Function and Ramp Time are visible for this Velbus type. If "no" the Function and Ramp is not visible for the velbus type. (The original specification said that Input Types have Function and Ramp – with the new spec the presence of Function and Ramp are specified in the cfg file)

If the Type obtained from "Read from Velbus" is not found in the velbus.cfgx file, it should appear as "Unknown"

The existing cclx files with UCM/Velbus should remain compatible when the velbus.cfgx file is used.

Document Revision History

- 1.0.1 (19 June 2010): Initial release
- 1.0.3 (11 October 2010): Added LEDs status during Learning and when there is no EEPROM on U2 IC socket.
- 1.1.0 (17 July 2011) New UCM/Velbus with direct connection to Velbus CAN Bus. Support for new Velbus modules
- 1.1.1 (26 Sept. 2012) - Add description of J103 terminator
- 2.0.1 (23 Jan 2013) - version 7 with new ID setting, Get Module status and new modules support
- 2.0.2 (1 June 2018) – added Diagnostic LEDs description D103 to D106
- 3.0.0 (16 February 2019) – new Velbus Features

Document Title: **Comfort to Velbus Interface**
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