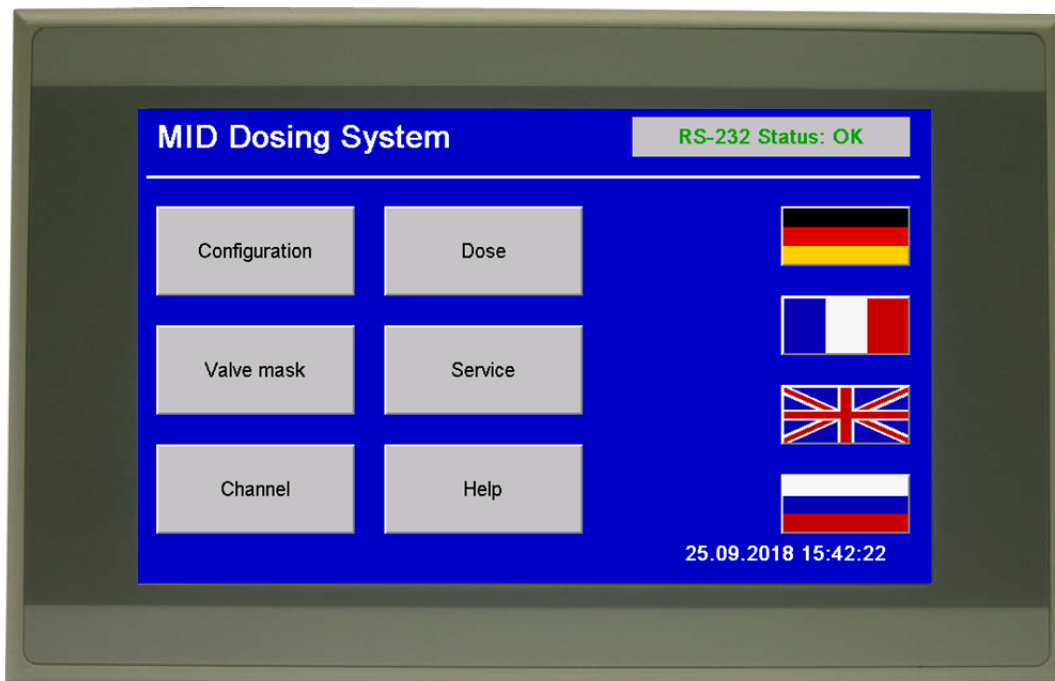


## MID - Terminal

Type XV102

Dosing terminal for MID-MDS

## Manual



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## 1. Main features

- parameterization and visualisation of the data in the MID/MDS system

For the parameterization of the following data:

- filling amount
- overflow correction and maximum filling time shutdown
- tolerance control of the filled amount
- 1 or 2 step valve shutoff
- manuel or automatical start

Channel				RS-232 Status: OK
Nr.	K-Factor, [imp/ml]	Set value, [ml]	Correction	
1	28.293	100.0	1.00000	
2	28.293	100.0	1.02775	
3	28.293	100.0	1.00000	
4	28.293	100.0	1.00000	
5	28.293	100.0	1.00000	
6	28.293	100.0	1.00000	

## 2. Description

The terminal is a touch panel and is to parameterize and visualize the data of the MID-MDS system. It can manage up to 12/48 filling points. It is only for the use with the MID-MDS system of Bopp & Reuther Messtechnik.

The Terminal calculates for each filling point an overflow correction. It also shutoff the valves if the maximum filling time is exceeded.

The filling can be started or stopped via external inputs or via the touch panel.



### 3. Technical Data

- 1 slot for 1 SD-card
- Resistive – Touch
- 7,0" TFT-LCD, 800x480 Pixel, 64k colours, VGA

Communication interface:

- RS232, only for communication with the MID-MDS system

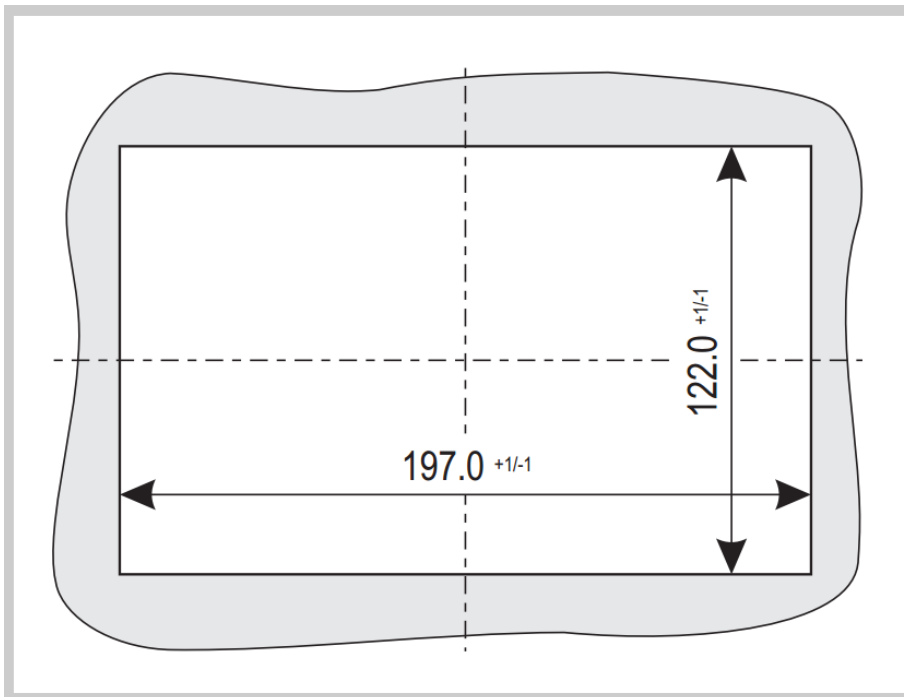
Power supply

- nominal voltage 24VDC
- Voltage range 19,2...30,0 VDC
- power consumption max. 7 W
- polarity protected



### 4. Dimensions

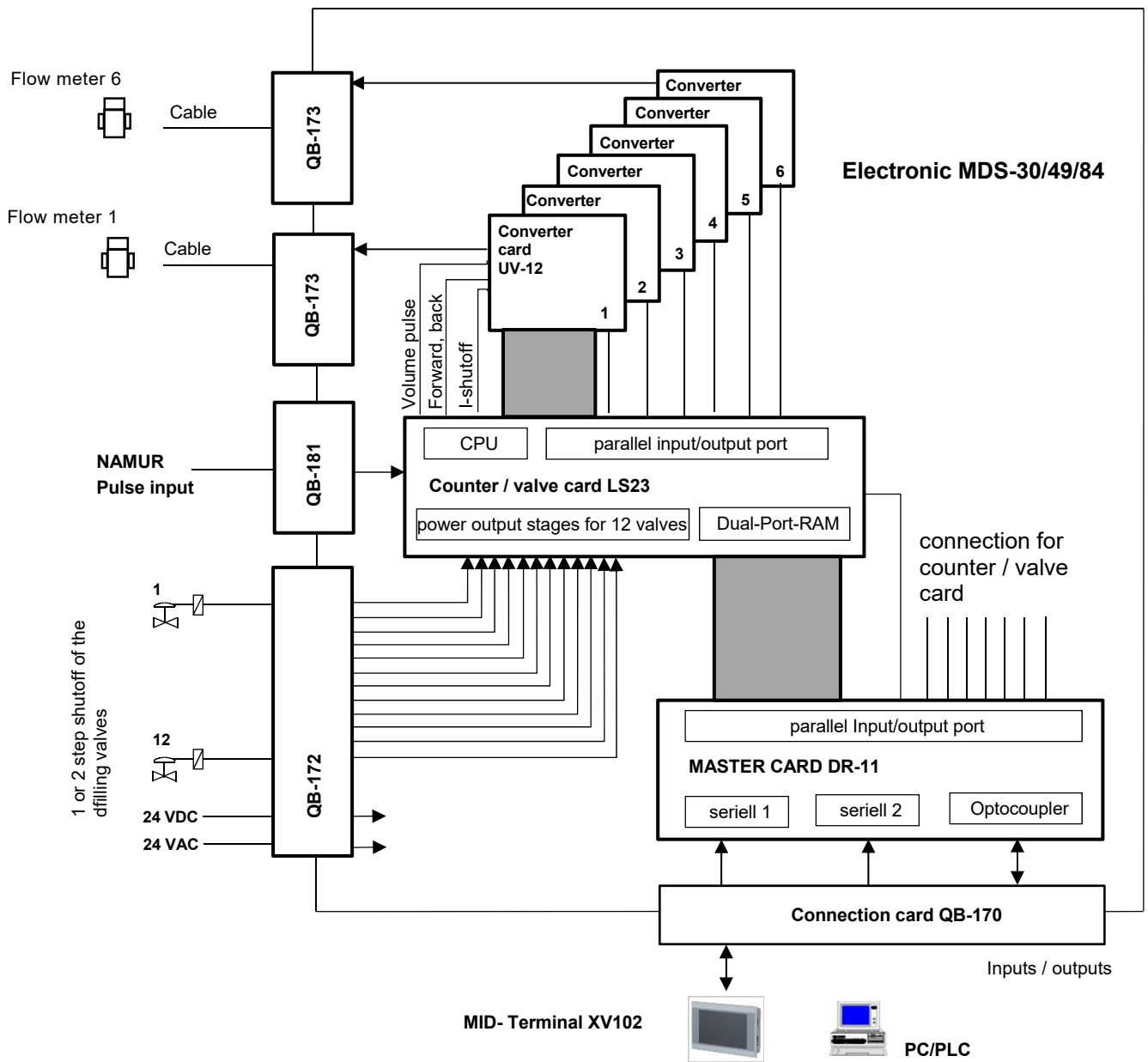
- 7,0" device: 197 × 122 mm (±1 mm)
- material thickness of the plate where the terminal will be mounted 2...5 mm



### 5. Principle structure of a filling unit

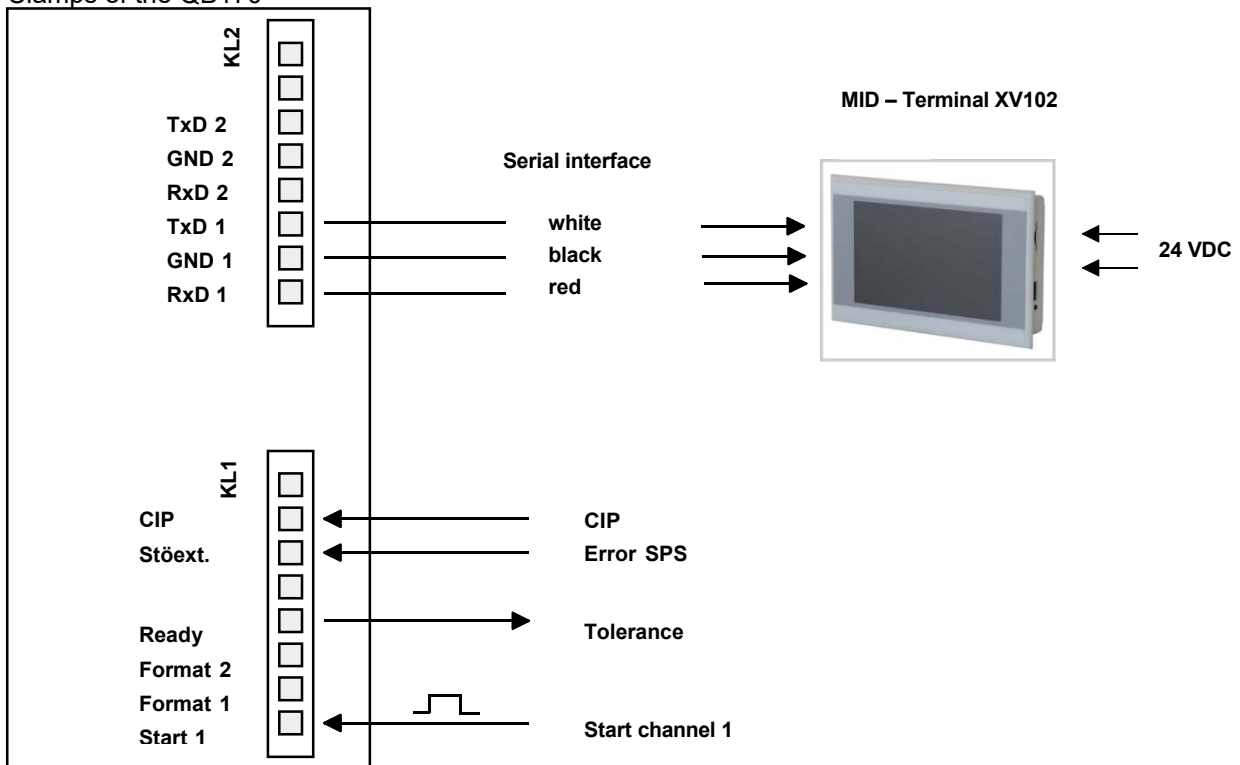
The filling system MID-MDS consist of the following components:

- electromagnetic flow meter series MID
- converter card type UV- 12
- counter and valve card type LS- 23
- Master Card type DR- 11
- MID – dosing terminal



### 6. Electrical connection

Clamps of the QB170



### 7. Operation

Terminal switch on: connect to power supply (24 VDC).  
 Terminal switch off: disconnect from power supply.

After booting, the main menu is shown:



Here you can choose the language and the menu configuration, dosing, channels, service and help.

## 7.1 Configuration

Following parameters are adjustable:

The screenshot shows a blue configuration screen with the following elements:

- Configuration** (Title)
- RS-232 Status: OK** (Green indicator)
- Number of fillers:** 36
- Max. dosing time:** 5000
- Overflow correction:** on
- Valve B open at:** 0
- Valve B close at:** 0
- Display of unit:** ml
- Example:** Volume, [ml] ; K-Factor, [imp/ml]
- Back** (Button)

<b>Amount of fillers:</b>	1-48
<b>Overflow correction:</b>	on / off
<b>Maximum filling time:</b>	0: Parameter inactive 1-65535: time in milliseconds

### Valve B opens / closes at:

This parameter is only relevant for a 2-step-shutoff valve.  
Are both values 0, so the parameter is inactive.

### Tolerance:

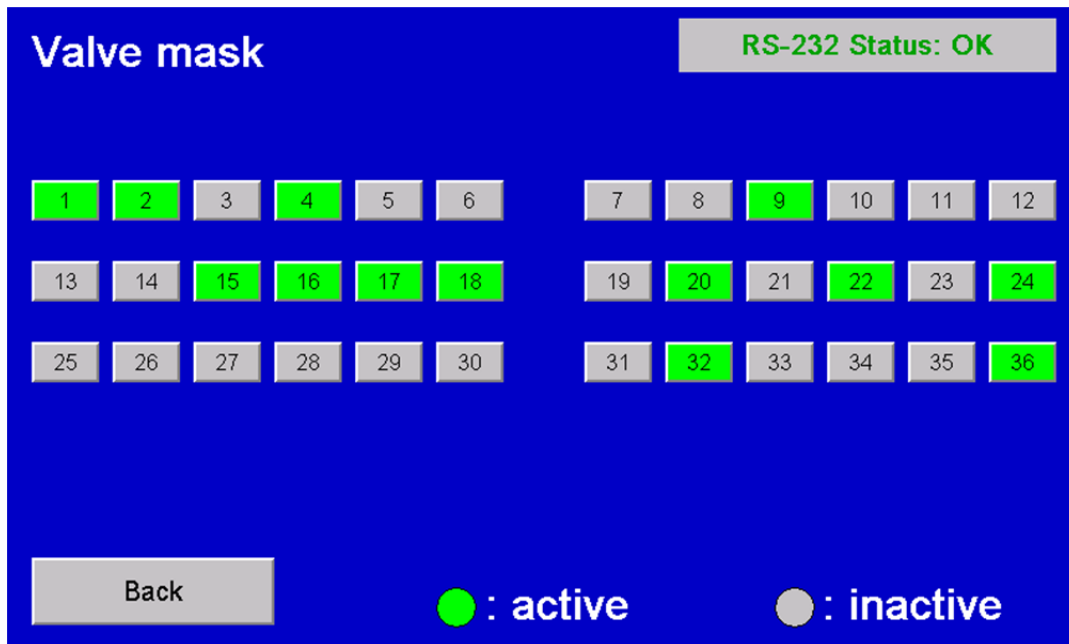
Value in per mille, the values 0 to 255 are valid. Is the deviation of one filling point larger than the configured tolerance, the output for the tolerance is while the next filling „high“.

### Units:

Selectable units, [g] and [imp/g] for Coriolis mass meter or [ml] and [imp/ml] for volume meter, the selection has **no** functional impact.

**Valve mask:**

Each channel can be activated (green) or deactivated (grey).



E.g.: Here on the picture 36 channels are given, whereby only 1-2, 4, 9,15-18, 20, 22, 24, 32, and 36 are active.

With the button „back“ the parameters are stored and transmitted to the MID-MDS system. A window “please wait ...“ appears while the parameters get transmitted to the MID-MDS system.

**7.2 Channels**

The "Channels" submenu item consists of eight visualization masks for channels 1 -6 to 42 - 48. The key for switching is located at the bottom right.

A K-factor is assigned to each channel separately in the mask. After entering the value for channel 1, a prompt appears asking whether this value is to be accepted for all channels.

The channels set as inactive in the configuration mask are displayed grayed out here and have no input options.



Channel			RS-232 Status: OK
Nr.	K-Factor, [imp/ml]	Set value, [ml]	Correction
1	28.293	100.0	1.00000
2	28.293	100.0	1.02775
3	28.293	100.0	
4	28.293	100.0	1.00000
5	28.293	100.0	
6	28.293	100.0	

By entering the reference value, it is possible to assign a correction factor to each channel separately.

The aim is to correct the filled quantity without having to change the target value or the K-factor.

First, a reference value is recorded (e.g. with a check weigher) for a specific channel. The recorded value is entered into the corresponding field:

Channel			RS-232 Status: OK
Nr.	Correction		
1	Filler number: 4	Old value	1.00000
2		Set-Value	100.0
3	Reference value	New value	0.99010
4	101.00		
5			
6			

Shown below is a reference value of 101,00 g for the channel 4. After the input the button „NEW“ appears on the right side. Press this button and the correction value will be calculated and the reference value get erased again.

Channel			RS-232 Status: OK
Nr.	K-Factor, [imp/ml]	Set value, [ml]	Correction
1	28.293	100.0	1.00000
2	28.293	100.0	1.02775
3	28.293	100.0	
4	28.293	100.0	0.99010
5	28.293	100.0	
6	28.293	100.0	

Is there a correction value  $\neq 1.0$ , the calculation of the pulse amount till valve shutoff is as follows:

$$\text{Pulse amount} = \text{Set value [g]} * \text{K-Factor [imp/g]} * \text{Correction}$$

The correction value is:

$$\text{Correction New} = (\text{correction Old} * \text{Set value}) / \text{Reference value}$$

To set correction factors to 1.0 please press „Set to 1.0“.

### 7.3 Dosing

In the "Dosing" mask, it is possible to assign a set point to a channel.

After entering the value for channel 1, a prompt appears asking whether this value is to be accepted for all channels.

The OFF mode is located at the top in the middle, so that you can switch between "Internal" and "External".

If "Internal" mode is selected, the dosing system is controlled manually by the "RUN" key. In the "OFF" mode, the dosing system only reacts to the external start signal.

**Dose**      OFF      RS-232 Status: OK

Nr.	Set value, [ml]	Actual value, [ml]
1	100.0	0.0
2	100.0	0.0
3		
4	100.0	0.0
5		
6		

Back      RUN      <<      1-6      >>

### 7.4 Service

The menu „Service“ consists of 2 functions:

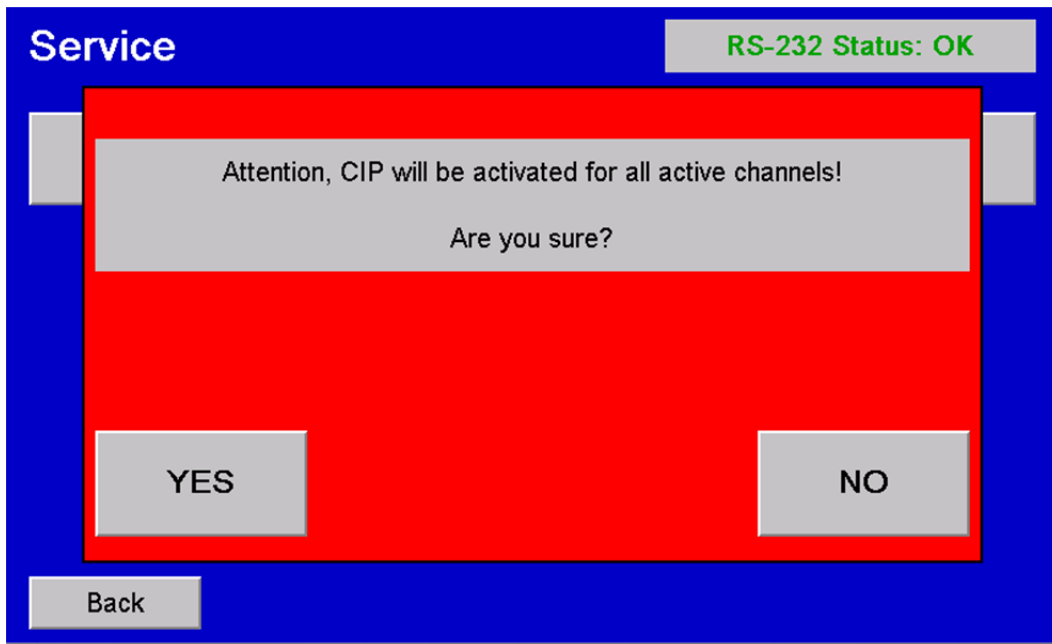
CIP: (Cleaning in Place) and automatically zero point adjustment.

**Service**      RS-232 Status: OK

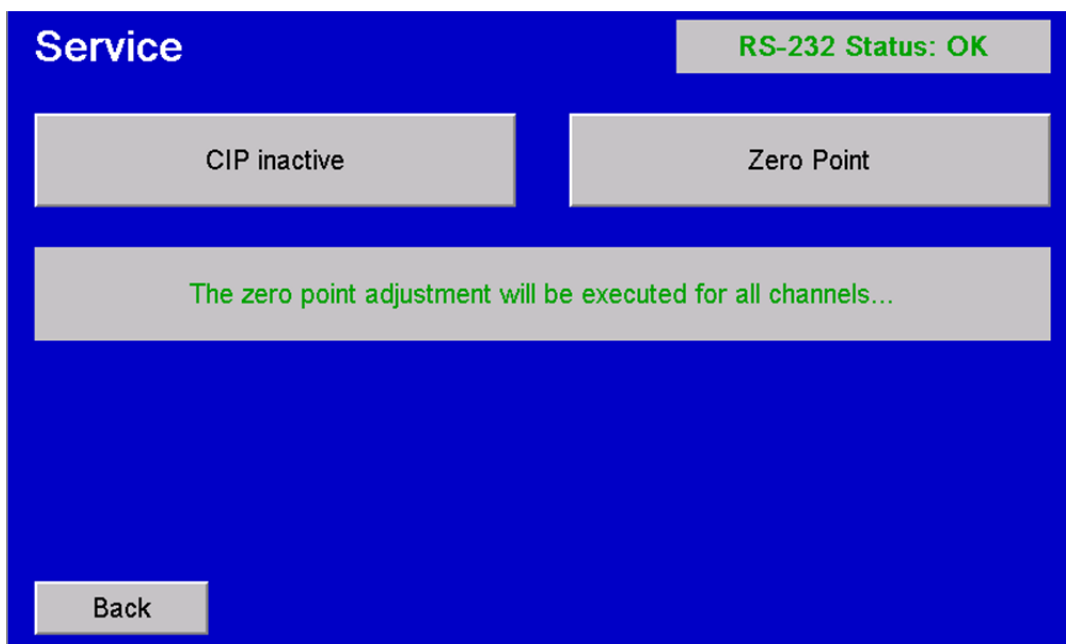
CIP inactive      Zero Point

Back

With the button „CIP“ all valves will be opened after a confirmation message. The valves will open as long the „CIP“-button will be pressed again.



The automatically zero point adjustment is only relevant, if the electromagnetic flowmeter series MID is used. The explanation of the function is shown in the manual for the electromagnetic flowmeter series MID.



## 7.4 Help

MID - MDS - Terminal  
Sachnummer: 2-81-25938-001  
Software Ver.: 2.00

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Reboot

Back