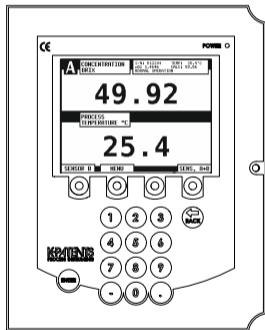


# Pocket Guide

Indicating Transmitter  
Operating and configuring  
displays

DTR



**VAISALA**

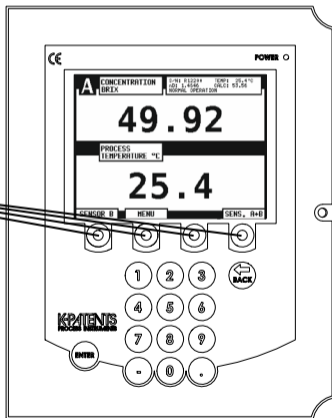
IM-EN-DTR-PG-B

Keyboard functions .....	1
Changing display language.....	2
Display backlight and contrast .....	3
Password .....	4
Changing IP address .....	5
Checking chemical curve parameters .....	6
Entering field calibration parameters.....	7
Direct BIAS adjustment.....	8
Configuring mA outputs .....	9
Default mA output .....	10
Damping time.....	11
Checking optical image.....	12
Configuring prism wash .....	13
Setting prism wash parameters.....	14
Testing prism wash .....	18

# Keyboard functions

Note. The display is *not* a touch screen.

Please use the numbers, ENTER, BACK and the four soft keys below the display.



## Changing display language



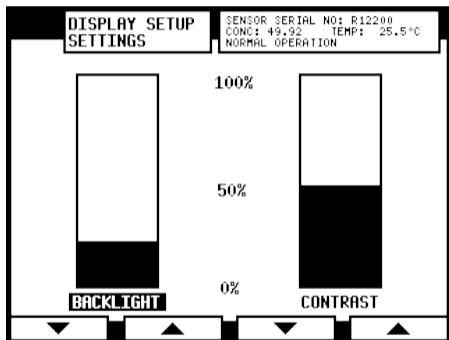
**MENU → 4 DISPLAY SETUP  
→ 5 DISPLAY LANGUAGE**



# Display backlight and contrast

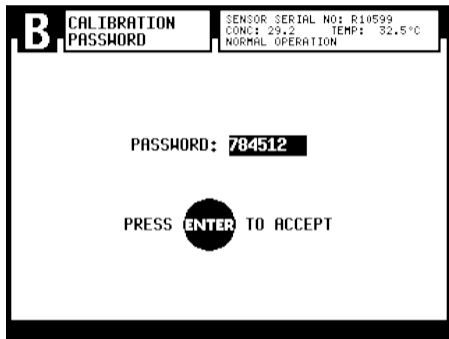


**MENU → 4 DISPLAY SETUP  
→ 2 DISPLAY BACKLIGHT  
& CONTRAST**



## Password

It may be necessary to enter a password before proceeding to the Calibration menu. The password is **784512**.



## Changing IP address



**MENU** → **5 CALIBRATION**  
→ **2 OUTPUTS**  
→ **8 NETWORK**

Type the new IP address and press  
ENTER.

<b>NETWORK</b> <b>IP ADDRESS</b>	SENSOR SERIAL NO: R12200 CONC: 49.92    TEMP: 25.5°C NORMAL OPERATION
-------------------------------------	---

IP ADDRESS:

OLD VALUE: 172.16.23.182  
NEW VALUE:

PRESS **ENTER** TO ACCEPT

## Checking chemical curve parameters



MENU → 5 CALIBRATION  
→ 1 CHEMICAL & FIELD  
PARAMETERS  
→ 1 CHEMICAL CURVE  
PARAMETERS

Delivery Data Sheet (DDS)

CHECK

*If the values  
don't match,  
please contact  
[info@kpatents.com](mailto:info@kpatents.com)*

The screenshot shows a handheld device screen with the following content:

- Top left: **A**
- Top middle: **CHEMICAL CURVE PARAMETERS**
- Top right: SENSOR SERIAL NO: R12200  
CONC: 49.92 TEMP: 25.5°C  
NORMAL OPERATION
- Main list:
  - 1 WATERLINE BASE INACTIVE**
  - 2 C00 0.000000
  - 3 C01 0.000000
  - 4 C02 0.000000
  - 5 C03 0.000000
  - 6 C10 138.6448
  - 7 C11 0.133622
  - 8 C12 -0.000619
  - 9 C13 0.000000
- Bottom left: 0 MORE ...
- Bottom right: Three buttons: a downward arrow, an upward arrow, and the word **SELECT**.

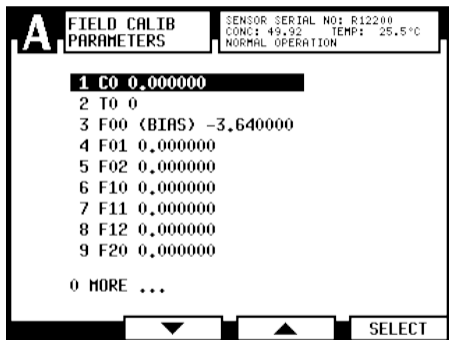


## Entering field calibration parameters



**MENU → 5 CALIBRATION**  
**→ 1 CHEMICAL & FIELD**  
**PARAMETERS**  
**→ 2 FIELD CALIBRATION**  
**PARAMETERS**

See the user manual section 6.6.3 on how to obtain the field calibration parameters.



## Direct BIAS adjustment



**MENU → 5 CALIBRATION  
→ 1 CHEMICAL & FIELD  
PARAMETERS → 2 FIELD  
CALIBRATION PARAME-  
TERS**

*For example:*

LAB	49.92 %
<u>CALC</u>	<u>53.56 %</u>
F00 (BIAS)	-3.64 %

For CALC press MENU → 3 SENSOR  
STATUS → FIELD SAMPLE

The screenshot shows the 'FIELD CALIBRATION PARAMETERS' menu. At the top right, sensor information is displayed: 'SENSOR SERIAL NO: R12200', 'CONC: 49.92', 'TEMP: 25.5°C', and 'NORMAL OPERATION'. The main menu items are:

- 1 CO 0.000000
- 2 TO 0
- 3 F00 (BIAS) -3.640000
- 4 F01 0.000000
- 5 F02 0.000000
- 6 F10 0.000000
- 7 F11 0.000000
- 8 F12 0.000000
- 9 F20 0.000000
- 0 MORE ...

At the bottom, there are three buttons: a down arrow, an up arrow, and a 'SELECT' button.

## Configuring mA outputs



**MENU → 5 CALIBRATION**  
**→ 2 OUTPUTS → 7 mA**  
**OUTPUTS → 1 mA OUTPUT**  
**1 / 2 mA OUTPUT 2**

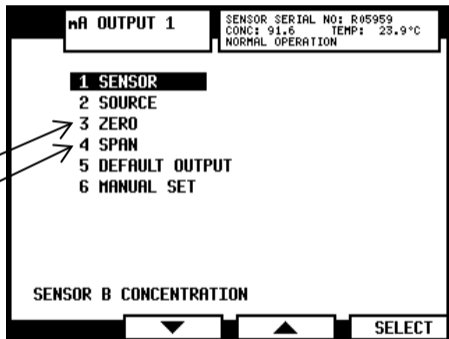
*For example:*

4 mA – 20 mA



10 % - 40 %

=> zero 10, span 30

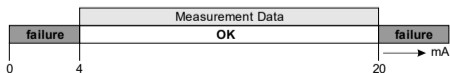


## Default mA output



**MENU → 5 CALIBRATION**  
**→ 2 OUTPUTS → 7 mA**  
**OUTPUTS → 1 mA**  
**OUTPUT 1 / 2 mA OUTPUT**  
**2 → 5 DEFAULT OUTPUT**

Default output sets a mA default output value that the instrument returns to in certain malfunction situations.



<b>mA OUTPUT 1</b>	SENSOR SERIAL NO: R12200
<b>DEFAULT OUTPUT</b>	CONC: 49.92 TEMP: 26.0°C
	NORMAL OPERATION

Default mA output:

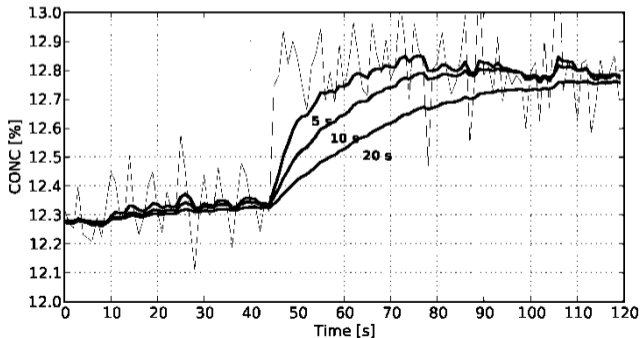
OLD VALUE: 22.00000  
NEW VALUE: XXXXXXXXXX

PRESS **ENTER** TO ACCEPT

## Damping time



**MENU → 5 CALIBRATION → 2 OUTPUTS → 4 DAMPING TIME**



**Damping time:**

5-20 s

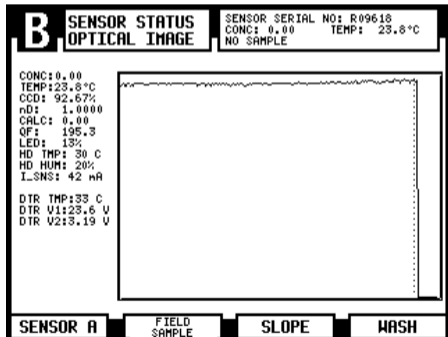
**Factory setting: 5 s**

Damping time is the time it takes for the concentration measurement to reach half of its final value.

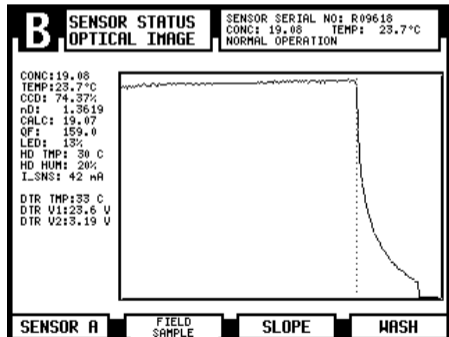
# Checking optical image



MENU → 3 SENSOR STATUS



*Empty pipe*

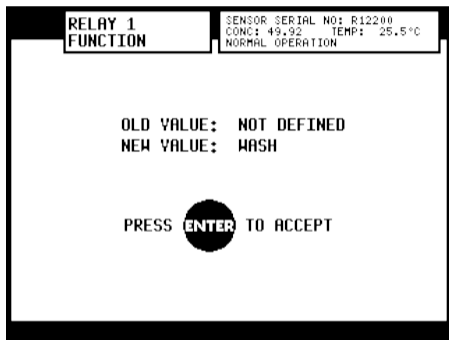


*Normal conditions*

## Configuring prism wash



**MENU → 5 CALIBRATION**  
**→ 3 RELAYS → 1 RELAY 1**  
**/ 2 RELAY 2 → 1 SENSOR**  
**→ 1 SENSOR A / 2**  
**SENSOR B**  
**→ 2 FUNCTION → 7 WASH**



## Setting prism wash parameters



**MENU → 5 CALIBRATION  
→ 4 PRISM WASH → 2  
WASH TIME / 3 RECOVERY  
TIME / 4 WASH INTERVAL**

Factory default values:

Wash time: 3 s

Recovery time: 20 s

Wash interval: 20 min

A screenshot of a device's menu interface. At the top left, a large letter 'A' is displayed. The main title is 'PRISM WASH PARAMETERS'. In the top right corner, sensor information is shown: 'SENSOR SERIAL NO: R12200', 'CONC: 49.92', 'TEMP: 25.6°C', and 'NORMAL OPERATION'. The menu items are listed as follows: '1 PRECONDITION TIME' (highlighted with a black bar), '2 WASH TIME', '3 RECOVERY TIME', '4 WASH INTERVAL', '5 WASH CHECK MODE', '6 HOLD DURING WASH', '7 TEMP LIMIT ACTIVATION', '8 TEMP LIMIT VALUE °C', '9 EMPTY PIPE CHECK', and '0 MORE ...'. At the bottom, there are four buttons: 'SENSOR B', a downward-pointing triangle, an upward-pointing triangle, and 'SELECT'.



**Wash medium parameters for integral wash nozzles in PR-23-AP/GP**

	<b>Minimum</b> <i>above process pressure</i>	<b>Maximum</b> <i>above process pressure</i>	<b>Wash time</b>	<b>Recovery</b>	<b>Interval</b>
<b>Steam (SN)</b>	2 bar (30 psi)	4 bar (60 psi)	3 s	20-30 s	20-30 min
<b>Water (WN)</b>	2 bar (30 psi)	4 bar (60 psi)	10 s	20-30 s	10-20 min
<b>High pressure water (WP)</b>	15 bar (220 psi)	40 bar (600 psi)	10 s	20-30 s	10-20 min

### Wash medium parameters for flow cell wash nozzle AFC

	<b>Minimum</b> <i>above process pressure</i>	<b>Maximum</b> <i>above process pressure</i>	<b>Wash time</b>	<b>Recovery</b>	<b>Interval</b>
<b>Steam (SN)</b>	3 bar (45 psi)	6 bar (90 psi)	3-5 s	20-30 s	20-30 min
<b>Water (WN)</b>	3 bar (45 psi)	6 bar (90 psi)	10-15 s	20-30 s	10-20 min
<b>High pressure water (WP)</b>	25 bar (350 psi)	35 bar (500 psi)	10-15 s	20-30 s	10-20 min

### Wash medium parameters for Safe-Drive Isolation valve nozzle SDI and SDI2

	CONC % value	Minimum <i>above process pressure</i>	Maximum <i>above process pressure</i>	Wash time	Reco very	Interval
<b>Steam (SN)</b>	10-30 %	2 bar (30 psi)	4 bar (60 psi)	2-3 s	20 s	120-360 min
	30-60 %	3 bar (45 psi)	6 bar (90 psi)	3 s	20 s	20-60 min
	60-90 %	4 bar (60 psi)	8 bar (120 psi)	3-5 s	20 s	15-25 min
<b>High pressure water (WP)</b>		25 bar (350 psi)	50 bar (725 psi)	10-15 s	20-30 s	5-20 min

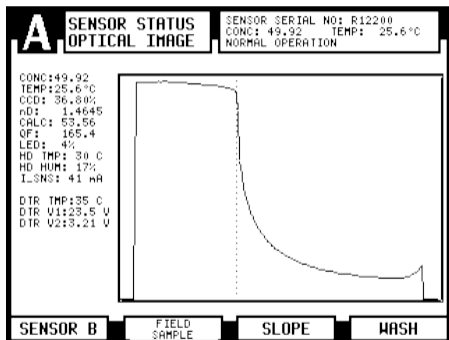
## Testing prism wash



**MENU → 3 SENSOR  
STATUS → WASH**

Indicators of successful wash:

1. TEMP going up during wash
2. nD changing during wash
3. Optical image changing during wash



*Optical image during wash*

# **VAISALA**

[www.vaisala.com](http://www.vaisala.com)