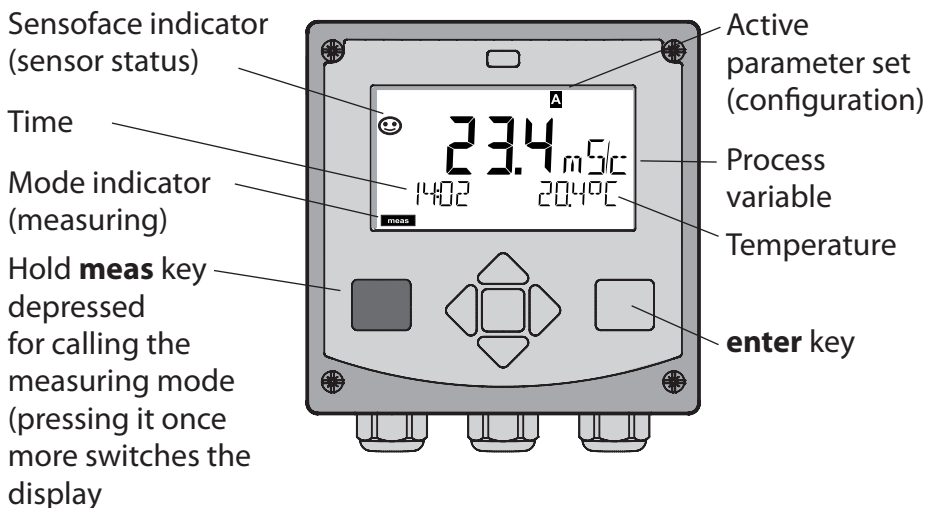


Measuring Mode

After the operating voltage has been connected, the analyzer automatically goes to "Measuring" mode. To call the measuring mode from another operating mode (e.g. Diagnostics, Service):

Hold **meas** key depressed (> 2 s).




In measuring mode the display indicates:

- Measured value and time (24/12 h AM/PM) as well as temperature in °C or °F (formats selected during configuration)

By pressing the **meas** key in measuring mode you can view the following displays (for approx. 60 sec):

- Measured value and selection of parameter set A/B (if configured)
- Measured value and tag (point of measurement designation – entered during configuration)
- Time and date

Pressing the **enter** key shows the output currents. They are displayed as long as **enter** is held depressed, then the measured-value display will return after 3 sec.

 The analyzer must be configured for the respective measurement task!

Quickstart

Keypad

Key	Function
meas	<ul style="list-style-type: none">• Return to last menu level• Directly to measuring mode (press > 2 s)
info	<ul style="list-style-type: none">• Retrieve information• Show error messages
enter	<ul style="list-style-type: none">• Configuration: Confirm entries, next configuration step• Calibration: Continue program flow• Measuring mode: Display output current
Arrow keys up / down	<ul style="list-style-type: none">• Measuring mode: Call menu• Menu: Increase/decrease a numeral• Menu: Selection
Arrow keys left / right	<ul style="list-style-type: none">• Measuring mode: Call menu• Menu: Previous/next menu group• Number entry: Move between digits

Sensocheck, Sensoface Sensor Monitoring

Sensocheck continuously monitors the sensor and its wiring.

Sensocheck can be switched on/off (default: off).

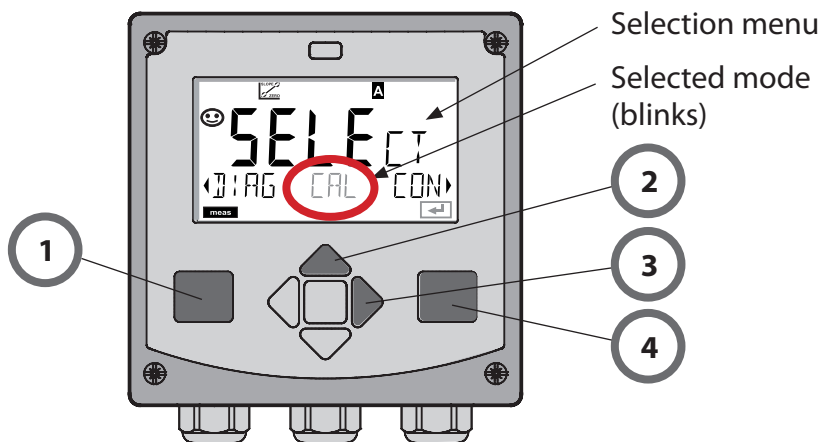


Sensoface provides information on the sensor condition. The three Sensoface indicators provide the user with information on required maintenance of the sensor.

Selecting the Mode / Entering Values

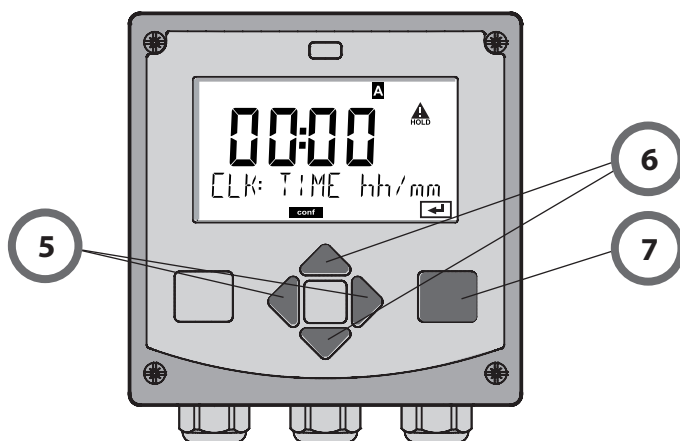
To select the operating mode:

- 1) Hold **meas** key depressed (> 2 s) (measuring mode).
- 2) Press any arrow key: the selection menu appears
- 3) Select operating mode using left / right arrow key
- 4) Press **enter** to confirm the selected mode

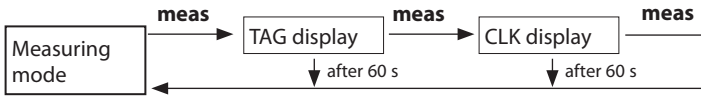


To enter a value:

- 5) Select numeral: left / right arrow key
- 6) Change numeral: up / down arrow key
- 7) Confirm entry with **enter**



Operating Modes / Functions



Pressing any arrow key opens the selection menu.
 Select the menu group using the left/right arrow keys.
 Press **enter** to open a menu. Press **meas** to return.



DIAG

CALDATA	Display of calibration data
SENSOR	Display of sensor data
SELFTEST	Self test: RAM, ROM, EEPROM, module
LOGBOOK	Logbook: 100 events with date and time
MONITOR	Display of direct, uncorrected sensor signals
VERSION	Display of software version, model designation, serial number

HOLD

Manual activation of HOLD mode, e.g. for sensor replacement.
 The signal outputs behave as configured (e.g. last measured value, 21 mA)

CAL

CAL_SOL	Calibration with calibration solution
CAL_CELL	Calibration by input of cell constant
P_CAL	Product calibration
CAL_RTD	Adjustment of temperature probe

CONF

PARSET A	Configuring parameter set A: See next page
PARSET B	Configuring parameter set B

SERVICE

(Access via code, factory setting: 5555)

MONITOR	Display of measured values for validation (simulators)
OUT1	Current source, output 1
OUT2	Current source, output 2
IRDA	Activating the IrDA interface
CODES	Specifying access codes for operating modes
DEFAULT	Reset to factory setting
OPTION	Enabling an option via TAN

Overview of Configuration

The configuration steps are assigned to different menu groups. With the left/right arrow keys you can jump between the individual menu groups.





Each menu group contains menu items for setting the parameters. Pressing **enter** opens a menu item. The values are edited using the arrow keys. Pressing **enter** confirms/stores the settings.

Return to measurement: Hold **meas** key depressed (> 2 s).



Select menu group	Menu group	Code	Display	Select menu item
	Sensor selection	SNS:		 enter enter enter enter
		Menu item 1		
		:		
		Menu item ...		
▶	Current output 1	OT1:		
▶	Current output 2	OT2:		
▶	Compensation	COR:		
▶	Alarm mode	ALA:		◀
▶	Setting the clock	CLK:		◀
	Point of measurement	TAG:		◀

Calibration with Calibration Solution

Input of temperature-corrected value of calibration solution with simultaneous display of cell constant

Display	Action	Remark
	<p>Select Calibration. Press enter to proceed. Select CAL_SOL calibration method. Press enter to proceed.</p>	
	<p>Ready for calibration. Hourglass blinks.</p>	<p>Display (3 sec) Now the device is in HOLD mode.</p>
	<p>Immerse sensor in calibration solution. Enter the temperature- corrected value of the calibration solution using the arrow keys (see table). Press enter to confirm.</p>	<p>Lower line: Display of cell constant and temperature</p>
	<p>The determined cell constant is displayed. The "hourglass" icon is blinking. Press enter to proceed.</p>	

Calibration with Calibration Solution

Display	Action	Remark
 <p>The LCD display shows a large number '1265' followed by 'mS/cm'. Below it, 'MEAS' and 'REPE' are visible. There are also 'HOLD' and 'i' icons at the top right, and a 'cal' indicator at the bottom left.</p>	<p>Display of selected process variable (here: mS/cm). Now the device is in HOLD mode: Reinstall the sensor and check whether the message is OK. MEAS ends calibration, REPEAT permits repetition.</p>	
 <p>The LCD display shows '1265 mS/cm' and 'GOOD BYE' with dashes on either side. There is a 'meas' indicator at the bottom left and a 'HOLD' icon at the top right.</p>	<p>With MEAS selected: Press enter to exit calibration.</p>	<p>Display of conductivity and temperature, Sensoface is active. After end of calibration, the outputs remain in HOLD mode for a short time. After display of GOOD BYE, the device automatically returns to measuring mode.</p>

Please note:

- Be sure to use known calibration solutions and the respective temperature-corrected conductivity values (see table on calibration solution).
- During the calibration procedure the temperature must be kept constant.

Error Messages

Error	Info text (is displayed in case of fault when the Info key is pressed)	Problem Possible causes
ERR 99	DEVICE FAILURE	Error in factory settings EEPROM or RAM defective This error message only occurs in the case of a total defect. The device must be repaired and recalibrated at the factory.
ERR 98	CONFIGURATION ERROR	Error in configuration or calibration data Memory error in device program Configuration or calibration data defective; completely reconfigure and recalibrate the device.
ERR 97	NO MODULE INSTALLED	No module Please have the module replaced in the factory.
ERR 96	WRONG MODULE	Wrong module Please have the module replaced in the factory.
ERR 95	SYSTEM ERROR	System error Restart required. If error still persists, send in the device for repair.
ERR 100	INVALID SPAN OUT1	Span Out1 configuration error
ERR 101	INVALID SPAN OUT2	Span Out2 configuration error
ERR 105	INVALID SPAN I-INPUT	I-Input configuration error

Error	Info text (is displayed in case of fault when the Info key is pressed)	Problem Possible causes
ERR 11	<p>CONDUCTIVITY RANGE</p> <p>CONCENTRATION RANGE</p> <p>SALINITY RANGE</p>	<p>Display range violation</p> <p>Cond > 999.9 mS/cm > 99.99 S/m < 1 ohm * cm</p> <p>Conc > 9.99 %</p> <p>SAL > 45.0 ‰</p>
ERR 12	CONDUCTANCE TOO HIGH	<p>Measuring range of conductance exceeded</p> <p>> 3500 mS/cm</p>
ERR 13	TEMPERATURE RANGE	<p>Temperature range violation</p>
ERR 15	SENSOCHECK	<p>Sensocheck</p>
ERR 60	OUTPUT LOAD	<p>Load error</p>
ERR 61	OUTPUT 1 TOO LOW	<p>Output current 1</p> <p>< 0 (3.8) mA</p>
ERR 62	OUTPUT 1 TOO HIGH	<p>Output current 1</p> <p>> 20.5 mA</p>
ERR 63	OUTPUT 2 TOO LOW	<p>Output current 2</p> <p>< 0 (3.8) mA</p>
ERR 64	OUTPUT 2 TOO HIGH	<p>Output current 2</p> <p>> 20.5 mA</p>

