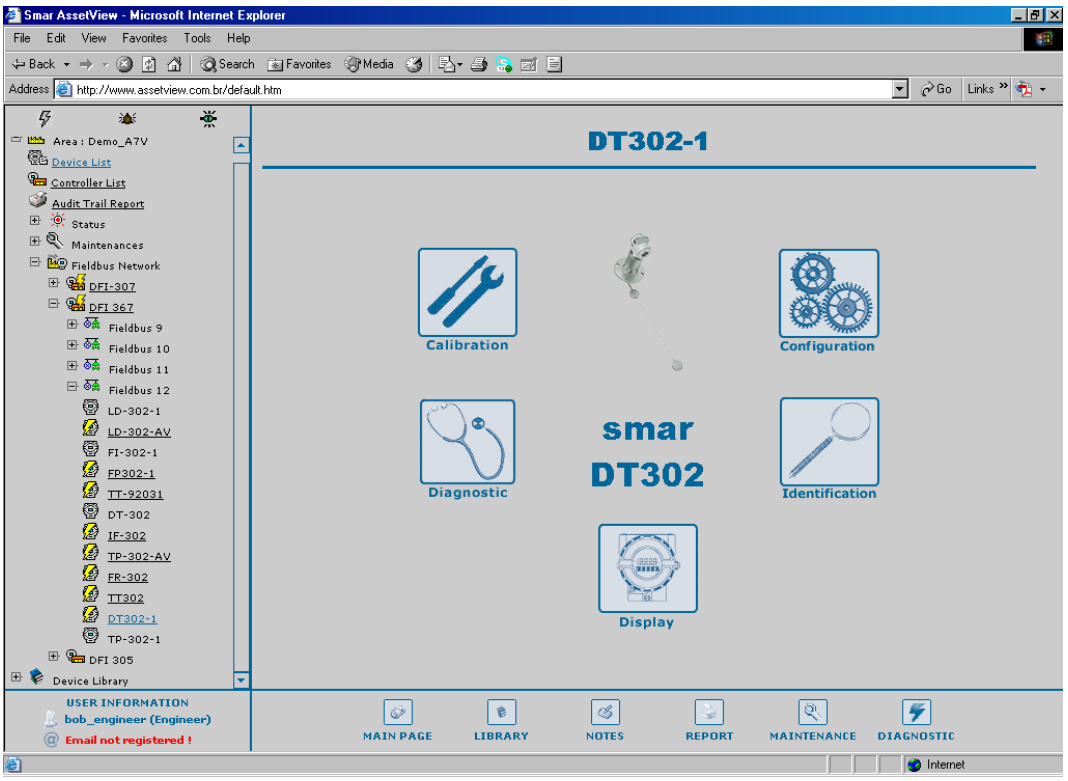
smar - AssetView HMI

USER'S MANUAL

DT302 - AssetView HMI



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AssetView HMI

ASVDT302ME

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DT302 - ASSETVIEW HMI

DT302 – Home page

This manual describes the pages developed for DT302 maintenance using AssetView.

The figure below shows the **DT302** initial page and its options:

Figure 1 – Home page

The following sub-sections will describe each one of the pages developed for the device maintenance.

DT302 - Identification Page

This page displays relevant information about the density transmitter. The user can easily identify and specify the transmitter in the physical plant.

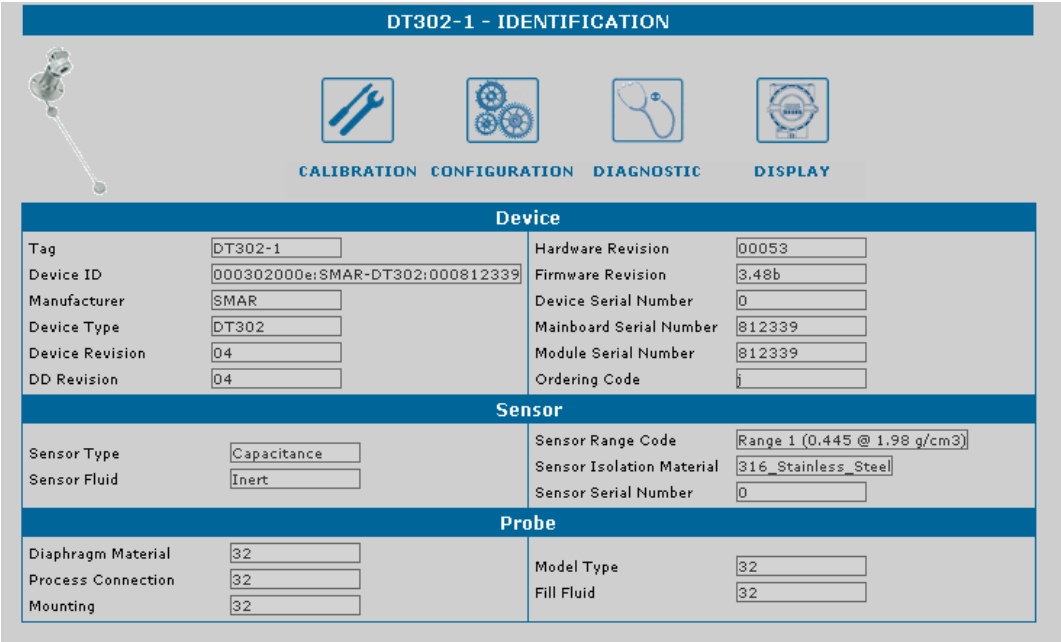

Figure 2 – Identification page

Device

TAG	Indicates the tag associated to the transmitter in the physical plant. The tag can have up to 8 characters.
DEVICE TYPE	Identifies the transmitter type for a specific manufacturer.
DEVICE SERIAL NUMBER	Indicates the transmitter serial number.
DEVICE REVISION	Indicates the transmitter revision.
HARDWARE REVISION	Indicates the transmitter hardware revision.
DEVICE ID	Indicates the transmitter identification code. This code can have up to 32 characters.
MANUFACTURER	Identifies the transmitter manufacturer.
MAIN BOARD SERIAL NUMBER	Indicates the serial number of the transmitter main board.
FIRMWARE REVISION	Indicates the transmitter firmware revision.
DD REVISION	Indicates the DD revision.
ORDERING CODE	Indicates the transmitter ordering code.

Sensor

SENSOR TYPE	Indicates the transmitter sensor type.
SENSOR FLUID	Indicates the fluid of the transmitter's sensor.
SENSOR RANGE CODE	Indicates the range code of the transmitter's sensor.
SENSOR ISOLATION MATERIAL	Indicates the sensor isolation material.
SENSOR SERIAL NUMBER	Indicates the transmitter sensor serial number.

Probe

DIAPHRAGM MATERIAL	Indicates the diaphragm material.
PROCESS CONNECTION	Indicates the process connection's type, the transmitter can have 2, 3 or 4 wires.
MOUNTING	Indicates the field mounting type.
MODEL TYPE	Indicates the transmitter model type.
FILL FLUID	Indicates the cell's fluid.

DT302 - Configuration Page

The density transmitter DT302 has a complete set of fieldbus commands to access any feature implemented. The configuration page allows the user to configure the device's parameters such as input limits, ranges adjustments, configuration of the linearization table, among others

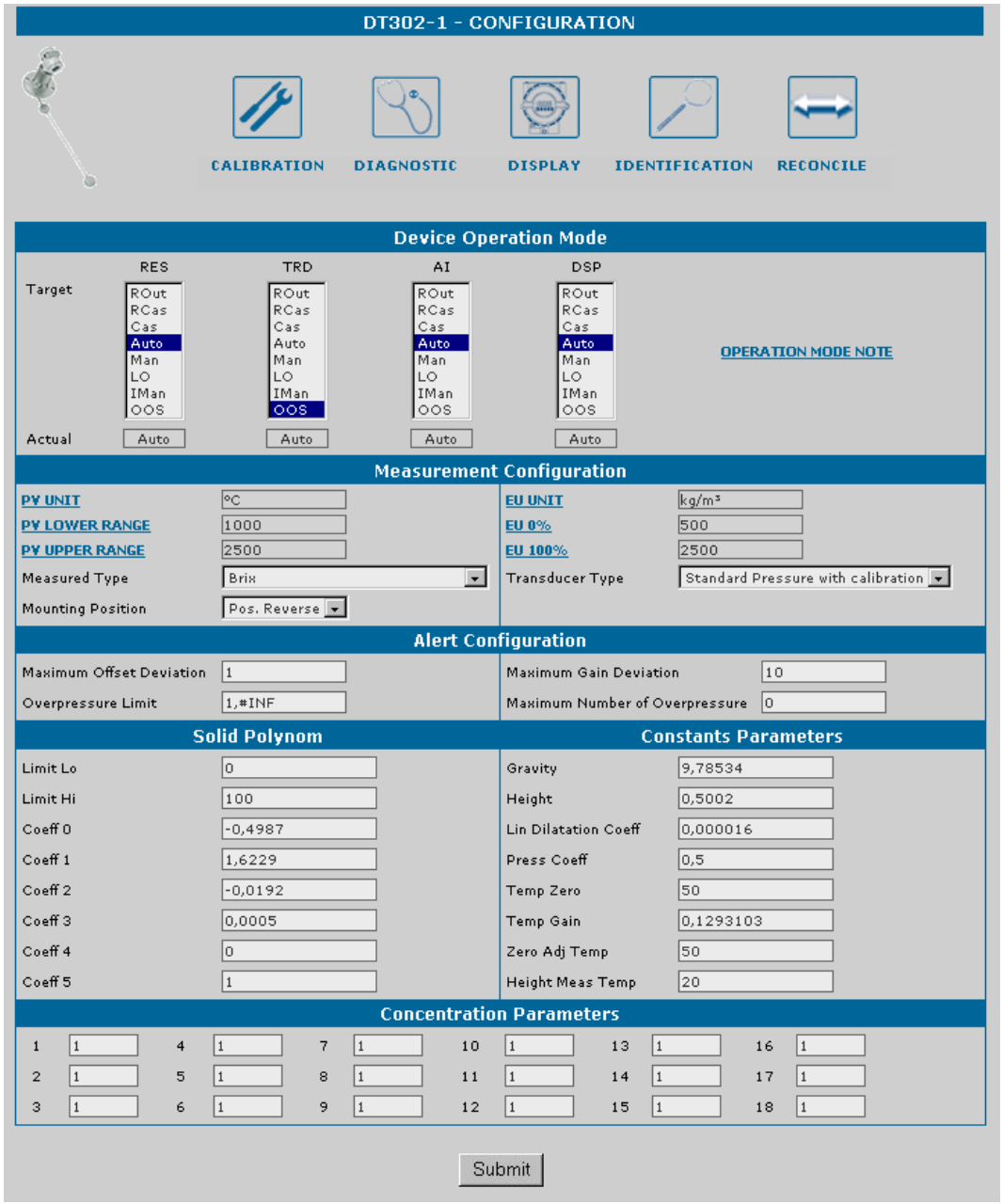

Figure 3 – Configuration page

Device Operation Mode

Indicates the operation mode for the device:

OOS	If this mode is selected, the value of the *Mode Block* parameter will be *Out of Service* for the *Resource*, *Transducer* and *Analog Output* blocks.
AUTO	If this mode is selected, the value of the *Mode Block* parameter will be *Auto* for the *Resource*, *Transducer*, *Display* and *Analog Output* blocks.
MAN	If this mode is selected, the value of the *Mode Block* parameter will be *Manual* for the *Analog Output* block, and *Auto* for the *Resource*, *Transducer* and *Display* blocks.

Measurement Configuration

PV UNIT	Unit of the process variable.
PV LOWER RANGE	Lower limit of the process variable.
PV UPPER RANGE	Upper limit of the process variable.
MEASURED TYPE	Specifies the measured type for concentration and density.
MOUNTING POSITION	Indicates the probe mounting position (direct or reverse).
EU UNIT	Engineering unit.
EU 0%	Value of the pressure corresponding to 0%, in EU.
EU 100%	Value of the pressure corresponding to 100%, in EU.
TRANSDUCER TYPE	Indicates the transducer type according to its class.

Alert Configuration

MAXIMUM OFFSET DEVIATION	Indicates the maximum offset deviation before an alarm is generated.
OVERPRESSURE LIMIT	Defines the maximum overpressure limit before an alarm is generated.
MAXIMUM GAIN DEVIATION	Defines the maximum gain deviation before an alarm is generated.
MAXIMUM NUMBER OF OVERPRESSURE	Defines the maximum number of overpressure before an alarm is generated.

Solid Polynomial

LIMIT LO	Lower limit in solid percent.
LIMIT HI	Upper limit in solid percent.
COEFF 0	Solid percent polynomial coefficient 0.
COEFF 1	Solid percent polynomial coefficient 1.
COEFF 2	Solid percent polynomial coefficient 2.
COEFF 3	Solid percent polynomial coefficient 3.
COEFF 4	Solid percent polynomial coefficient 4.
COEFF 5	Solid percent polynomial coefficient 5.

Constants Parameters

GRAVITY	Gravity acceleration used in concentration/density calculation. The unit is m/s^2.
HEIGHT	Distance between the two pressure sensors. The engineering units have to be compatible with IN_1 and IN_2. If are in mmH2O, the EU of height is in mm.
LIN DILATATION COEFF	Indicates the linear dilatation coefficient.
PRESS COEFF	Indicates the pressure coefficient.
TEMP ZERO	Offset coefficient used to calibrate the transmitter temperature.
TEMP GAIN	Gain coefficient used to calibrate the transmitter temperature.
ZERO ADJ TEMP	Temperature of zero adjustment.
HEIGHT MEAS TEMP	Temperature of measurement of distance between the pressure sensors.

DT302 - Diagnostics Page

The user can check the general status diagnostic in the **DT302 Diagnostic Page**.

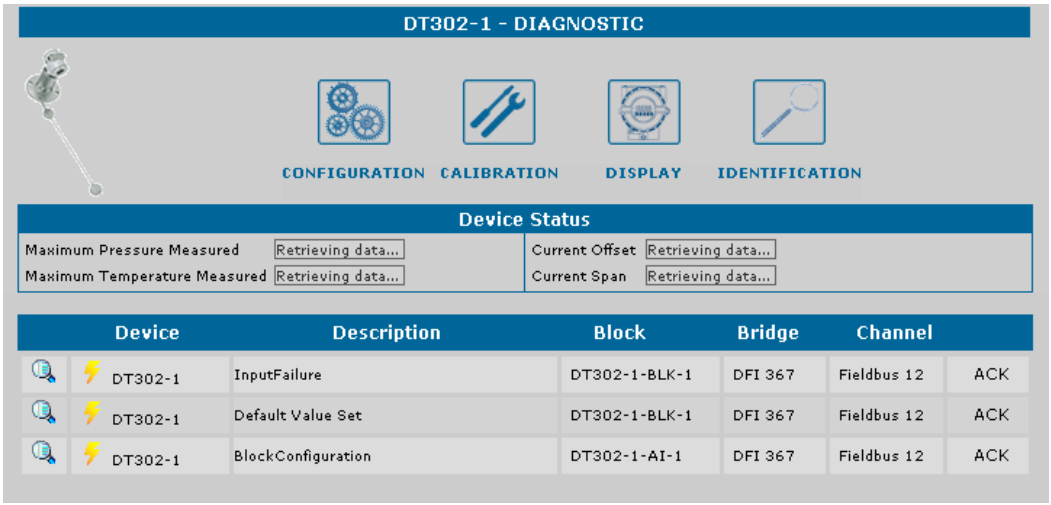

Figure 4 – Diagnostics page

Device Status

MAXIMUM PRESSURE MEASURED	Indicates the maximum pressure measured.
MAXIMUM TEMPERATURE MEASURED	Indicates the minimum temperature measured.
CURRENT OFFSET	Indicates the calibration current offset.
CURRENT SPAN	Indicates the calibration current span.

DT302 - Calibration Page

This page displays configuration data used in the calibration procedures.

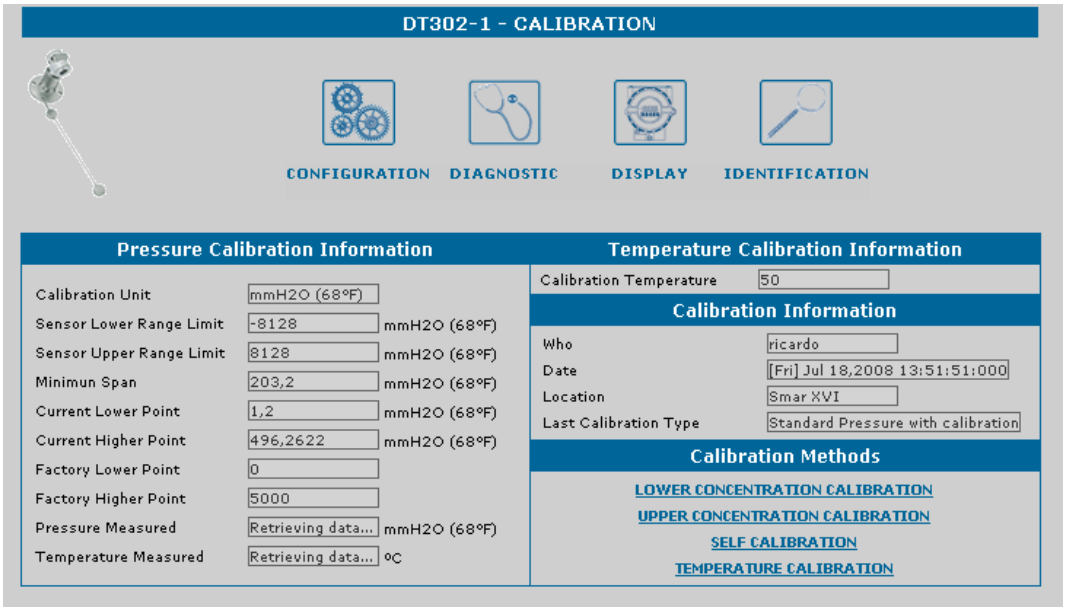

Figure 5 – Calibration page

Pressure Calibration Information

CALIBRATION UNIT	Indicates the unit for the pressure calibration procedure.
SENSOR LOWER RANGE LIMIT	Indicates the lower limit for the range's sensor.
SENSOR UPPER RANGE LIMIT	Indicates the upper limit for the range's sensor.
MINIMUM SPAN	Indicates the minimum value allowed between the lower and upper points of the calibration.
CURRENT LOWER POINT CALIBRATION	Indicates the current lower point of the pressure calibration.
CURRENT HIGHER POINT CALIBRATION	Indicates the current higher point of the pressure calibration.
FACTORY LOWER POINT CALIBRATION	Indicates the factory's lower point of the pressure calibration.
FACTORY HIGHER POINT CALIBRATION	Indicates the factory's higher point of the pressure calibration.
PRESSURE MEASURED	Indicates the pressure measured by the device.
TEMPERATURE MEASURED	Indicates the temperature measured by the device.

Temperature Calibration Information

CALIBRATION TEMPERATURE	Indicates the value of the last temperature calibration.

Calibration Information

WHO	Indicates the responsible for the last sensor calibration.
DATE	Indicates the date of the last sensor calibration.
LOCATION	Indicates the location of the last sensor calibration.
LAST CALIBRATION TYPE	Indicates the procedure of the last sensor calibration.

Calibration Methods

NOTE
When the transmitter is installed, it is recommended to run the **Lower Concentration Calibration** procedure to minimize the mounting. Please refer to the transmitter manual for further details.

LOWER CONCENTRATION CALIBRATION

This method is used when calibrating the lower density point. The user can select the calibration unit and type the value of the density applied as reference value to the transmitter, observing the sensor limits and the minimum span.

When this method is selected, a message appears warning the user that this procedure must be executed when the process stops or the plant control is set to manual.

Click **Yes**, apply the density and wait for the sensor stabilization.

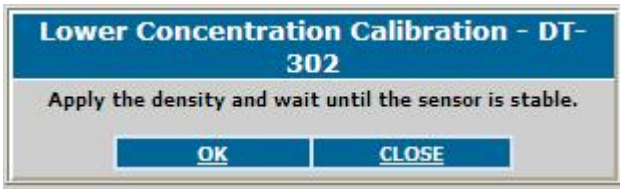

Figure 6 – Stabilizing the sensor

Click **OK,** and the density measured will be shown.

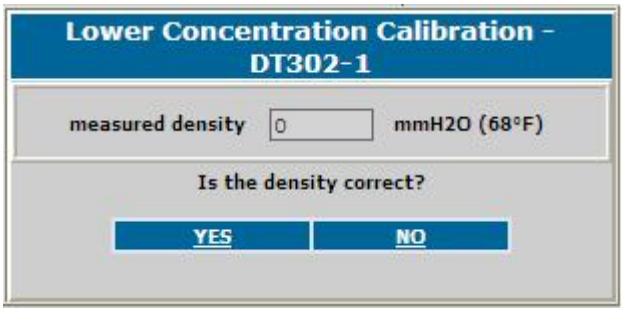

Figure 7 – Confirming the Value of the Density

If the value is correct, click **Yes** to conclude this procedure. Otherwise, click **No** and type the density value:

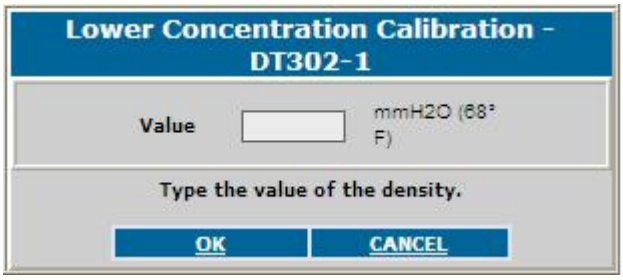

Figure 8 – New Density Value

Click **OK** to apply the new density value, and then click **Yes** to confirm the alteration, as shown in the last figure. The calibration procedure will be concluded.

UPPER CONCENTRATION CALIBRATION

This method is similar to the **Lower Concentration Calibration** procedure described above. It is used when calibrating the density with the user's reference instead of the manufacturer's reference.

Click **Yes**, apply the density and wait for the sensor stabilization.

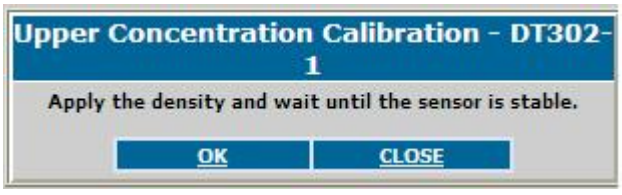

Figure 9 – Stabilizing the sensor

Click **OK,** and the density measured will be shown.

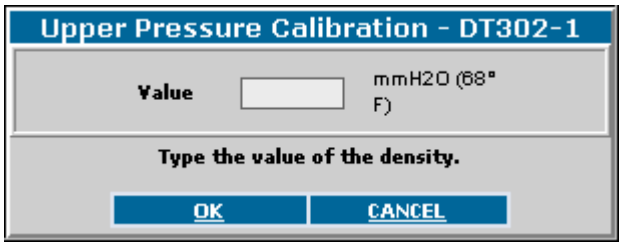

Figure 10 – Confirming the Value of the Density

If the value is correct, click **Yes** to conclude this procedure. Otherwise, click **No** and type the density value:

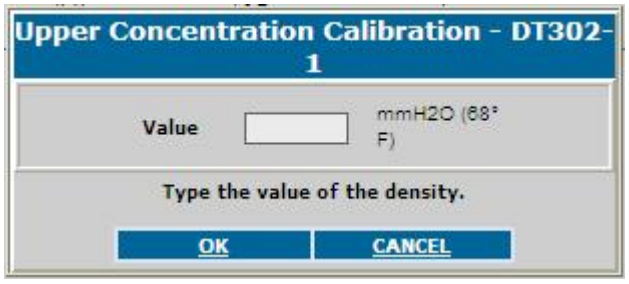

Figure 11 – New Density Value

Click **OK** to apply the new density value, and then click **Yes** to confirm the alteration, as shown in the last figure. The calibration procedure will be concluded.

TEMPERATURE CALIBRATION

This method is used for sensor temperature calibration. Click **Ok**, apply the temperature and wait for the sensor stabilization.

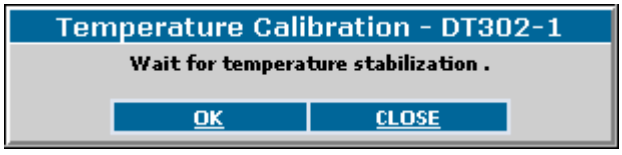

Figure 12 - Stabilizing the Temperature

Click **OK** to start the calibration. The temperature measured will be shown.

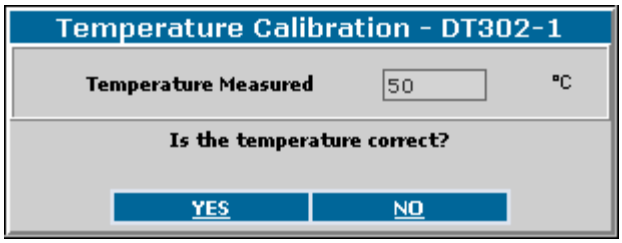

Figure 13 - Confirming the Value of the Temperature

If the value is correct, click **Yes** to conclude this procedure. Otherwise, click **No** and type the temperature value:

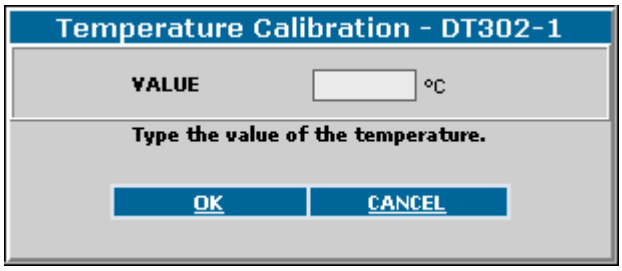

Figure 14 - New Temperature Value

Click **OK** to apply the new temperature value, and then click **Yes** to confirm the alteration, as shown in the last figure. The calibration procedure will be concluded.

DT302 – Display page

The user can configure the data that will be shown in the device's display.

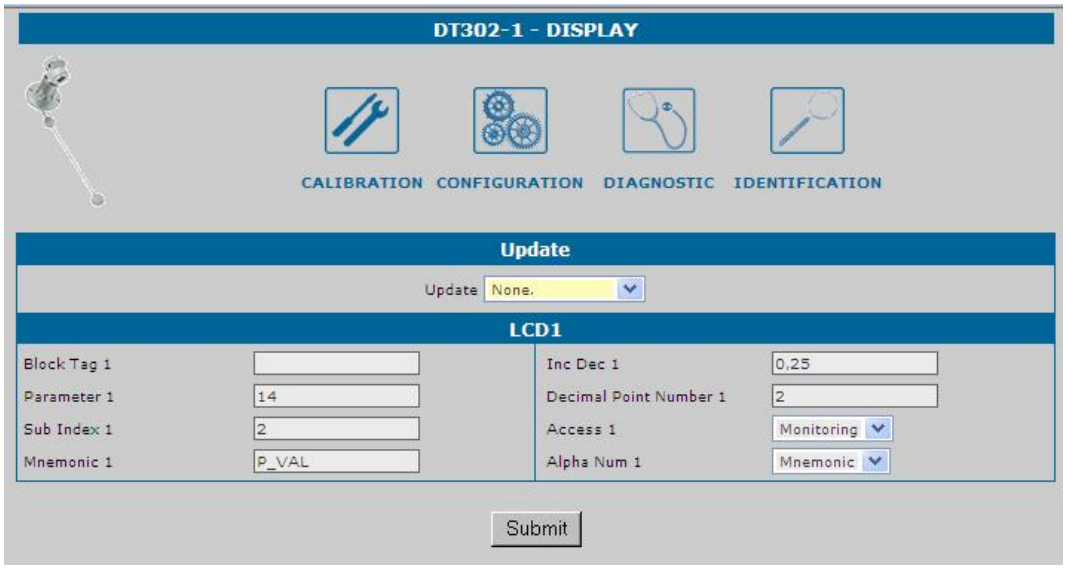

Figure 15 – Display Page

Display Options

BLOCK TAG	Shows the tags list of the available instantiated blocks.
PARAMETER	Shows the list of available parameters to be displayed in the LCD for the selected block in the *Block Tag* option.
SUB INDEX	Indicates the sub-index of the selected parameter.
MNEMONIC	Indicates the mnemonic of the selected parameter in the *Parameter* option.
INC DEC	Indicates the value to be added or subtracted when acting the parameter via local adjustment.
DECIMAL POINT NUMB	Indicates the number of digits after the decimal point that will be shown in the LCD.
ACCESS	The user can select the access type of the selected parameter: monitoring or action.
ALPHA NUM	Indicates if the alphanumeric field will be used for mnemonic or for value.