MEDITION PRECISION S.L.

SensoScope

Instruction manual   01.04.2014

This instruction manual refers to the device SensoScope. It contains important information on the operation and handling of the product. **It is important to read this entire manual before using SensoScope.**

This device is EMC tested and approved and corresponds to european and national standards and guidelines.

The conformity has been certified - please contact the manufacturer if you require information on corresponding declarations and documents.

To maintain the condition and performance, and to guarantee safe use, operators have to follow the instructions.

The information contained in this manual is believed to be accurate and reliable. However, Medition precision S.L.   assumes   no responsibility for its use and shall not be liable for any special, incidental, or consequential damages related to the use of this product.

1. General Information

The gauge SensoScope is a checking device to determine, display and evaluate compression ratio.

The well-visible LED-Display and widely radiant limit-indicators provide a clearness of display when operating. A limit-switch enables the processing of limit-exceeding values, e.g. activation of signal elements or magnetic valves. Additionally, a RS485 data interface can be connected in order to log and save the data on a PC.

The lower and upper limiting values, the configuration of the limit-switch, the selection of units (kPa/in.Hg) and the data transfer rate of the interface can be customized in a setup-menu by the operator.

The robust case with IP65 ensures reliable performance of the SensoScope, even under rough conditions.

2. Display –and control elements

The measuring instrument consists of a well-visible 3-Digit LED-Display, two limit-indicators (LED) and a push-button for data entry.

Figure 1: Display- and control elements

1 measured value display (digit size 20mm)
2 limit-indicator maximum
3 limit-indicator minimum
4 push-button for data entry
5 sensor connection (internal / external)
6 datalogger connection
7 power connection

# 3.	Adjustment of the SensoScope
3.1. Data entry

The operator can customize and adjust the settings of the SensoScope to comply with individual requirements using the Setup-menu.

By pressing the push-button until **SEt** is indicated on the display and selected, adjustments for the device can be made. Parameters F1-F5 can be selected by re-pressing the push-button. Data entry is to be made for every digit displayed. Every digit will be activated by timed switching.

(With using the temperature sensor, a negative prefix can be selected in the first digit for parameters F1,F2,F6!)

Settings will be saved after entering the last parameter, the device returns from setup-mode automatically.

3.2. Parameters F 1 – F 5

Modes of operation:

F 1 – upper limit (maximum)

F 2 – lower limit (minimum)

F 3 – units of measurement

1= kPa / °C

2= in.Hg / °F

F 4 – datarate [s] (time lag of 2 measured values)

F 5 - configuration of threshold-display and –switch

value	limit-display	Output of measured value > upper limit	Output of measured value < lower limit
1	OFF	OFF	OFF
2	ON	OFF	OFF
3	ON	ON	OFF
4	ON	OFF	ON
5	ON	ON	ON

Figure 2: set-up options

4. Specifications

Metering range

vacuum : 0-60 kPa / 0-90 kPa (optional)

pressure : 0-40 kPa

Precision

vacuum : +/- 1%

Interface

RS485, 8 bit, 57600 Bd

limit-switch

2,0 A, 30V, short-circuit-proof

Operating temperature

0 °C – 50°C

Storage temperature

-20 °C – 60°C

Dimensions

120 x 90 x 50 mm

Weight

340g

Powersupply
10V...30V, AC/DC
Tests
EN 61000-6-3:2007

EN 61000-6-1:2007

Operating the pressure-sensor MPX5100, Senso-Scope has to be installed cautious, so that no liquids ingress and thereby damage the sensor !

6. Connections

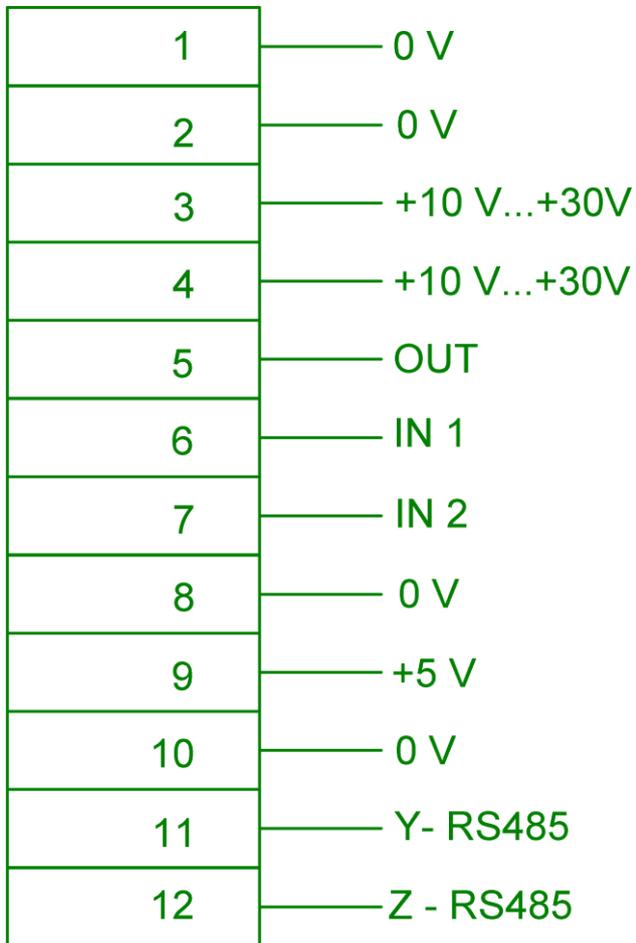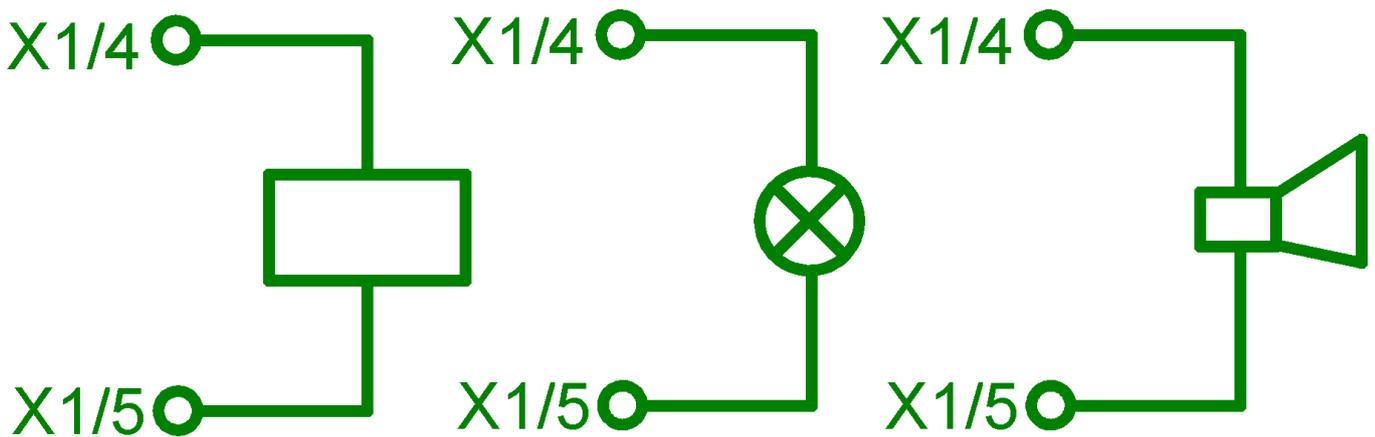| Pin	Signal
1	0 V
2	0 V
3	+10 V...+30V
4	+10 V...+30V
5	OUT
6	IN 1
7	IN 2
8	0 V
9	+5 V
10	0 V
11	Y- RS485
12	Z - RS485

Figure 3: configuration of connector X1

6.1. Connection of the limit-switch

With its short-circuit-proof and temperature-proof limit-switch, SensoScope can be used to control external modules.

6.2. Connection of a serial port

To log and save measurement data SensoScope can be connected to a PC (USB needed) via RS485 interface.