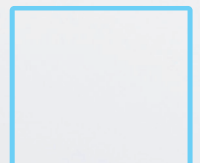
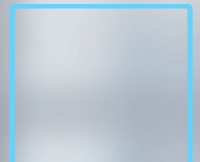
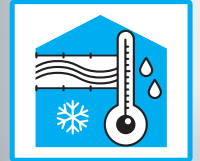


SENSO-X® – GET SMART

Faster, voltage-free parameterization
with Oppermann NFC®.



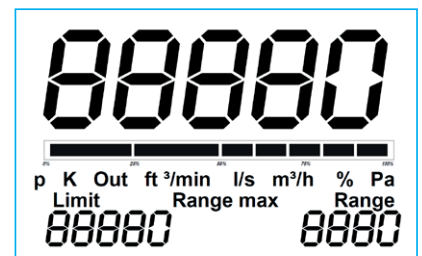
Highlights

- Extremely large, glare-free display for optimum readability even from a large distance
- Direct volume flow display in m³/h, l/s or ft³/min
- Linear output signal for volume flow, differential pressure or filter contamination (0–10 V or 4–20 mA)
- Adjustable working range
- Changeover contact for limit value message
- Filter contamination display in % (e.g. according to VDI 6022) or pressure display in Pa
- High measuring accuracy
- Ideal replacement for inclined tube manometers or mechanical gages
- Surface-mounted housing for all types
- Backwards compatible with SENSO
- Display with additional bar for limit value in % (PPX) or measured value relative to the working range (VPX)
- Manual zero point correction via push button
- Digital I2C pressure sensors with minimal drift/high long-term stability
- Spring clips for quick wiring
- Oppermann NFC® parameterization
- Additional temperature / absolute pressure transducer
- Optional Modbus bus versions
- Three-color LED (red/green/yellow)
- Version VPX1000 for volume flow measurement with higher accuracy up to 1,000 Pa

Display

With its additional bar, the display shows the set limit value in percent (PPX) or the measured value in relation to the set working range (VPX) and provides the operator with fast visual feedback.

The lower middle segment shows the function displays if the parameterization is carried out manually rather than via NFC. The three-color LED indicates normal operation in green, exceeding or falling below limit values in red and malfunctions in yellow..



Android- & iOS-App



NFC parameterization

NFC stands for Near Field Communication, which is a method of reading parameterization data in or out without power draw from the transmitter. All you need in order to use this technology is an NFC reader/writer that briefly induces a low voltage on an NFC-capable receiving device to allow data exchange.

90 percent time savings – Get Smart

NFC cuts initialization time by almost 90 percent compared with conventional parameterization or manual read-out of data using a display and keyboard, thus saving costs.

The **SENSO-X**® can be installed or placed on the table and can be powered or not. All data is read in or read out using either an NFC-capable smartphone or a miniature NFC reader. Nothing needs to be plugged in and unplugged and there is no need to set up any connections. Just plug and play. The option of using the **SENSO-X**® without a power supply is a major advantage. For example saves valuable time in the preparation of the projects. IT security is guaranteed because the NFC technology is only designed for short transmission distances of a few centimeters at most. In addition, all data and settings can be exported from the sensor in PDF format and stored in the mobile device, saving time on documentation. To configure your sensors via the Oppermann NFC app you either need an Android or iOS smartphone with an integrated NFC interface or a separate NFC-RW-02 device for communicating with your smartphone via Bluetooth.



NFC reader/writer with USB connection for configuring **SENSO-X**® transmitters via NFC.

Oppermann NFC tool

Download here now!



Click here for the video:



Unique functionality with the best design

The **SENSO-X®** product range combines detection, display, signaling and switching of differential pressure and volume flow in a standardized device concept featuring an optimized installation philosophy together with an attractive design. **SENSO-X®** is capable of replacing all common differential pressure indicators, differential pressure monitors, differential pressure transmitters as well as all volume flow indicators and volume flow monitors with a standardized concept.

Differential pressure

Senso-X® PPX

ΔP in Pa or

Filter contamination in %

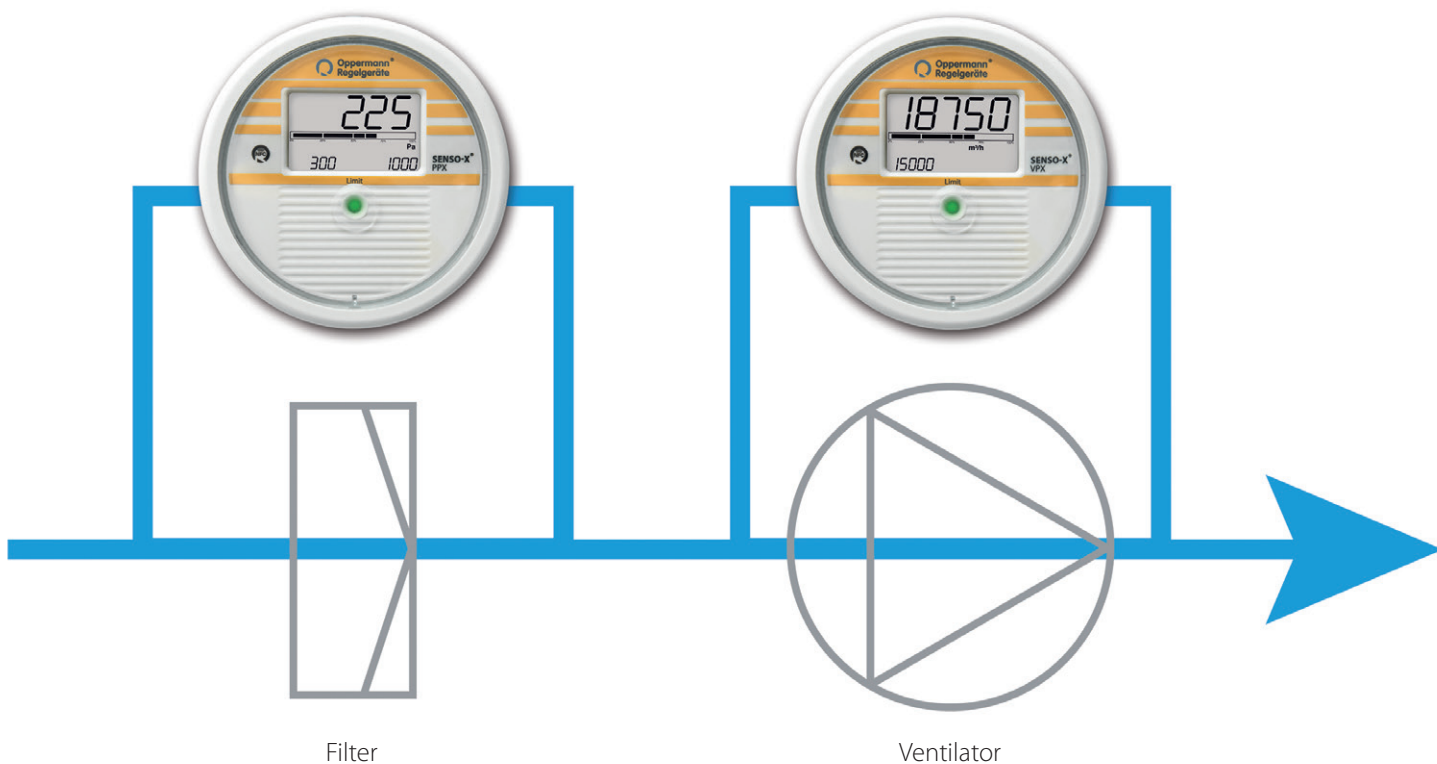
Volume flow

Senso-X® VPX

m^3/h (0 – 4,000 Pa)

via the ring nozzle of the fan

(input K-value and p -air)



OEM version

The device color and/or design/labelling of the front label, front panel or customer-specific function can be factory configured to meet the customer's specifications, depending on the quantity purchased. The units are delivered as standard in individual packaging, including the mounting bracket and fixing material. Delivery without assembly accessories is possible for bulk buyers.

Sophisticated design

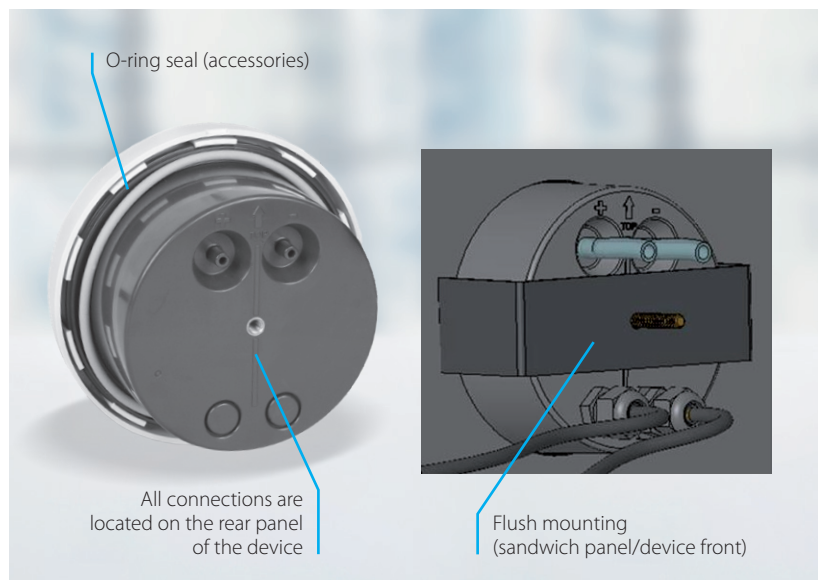
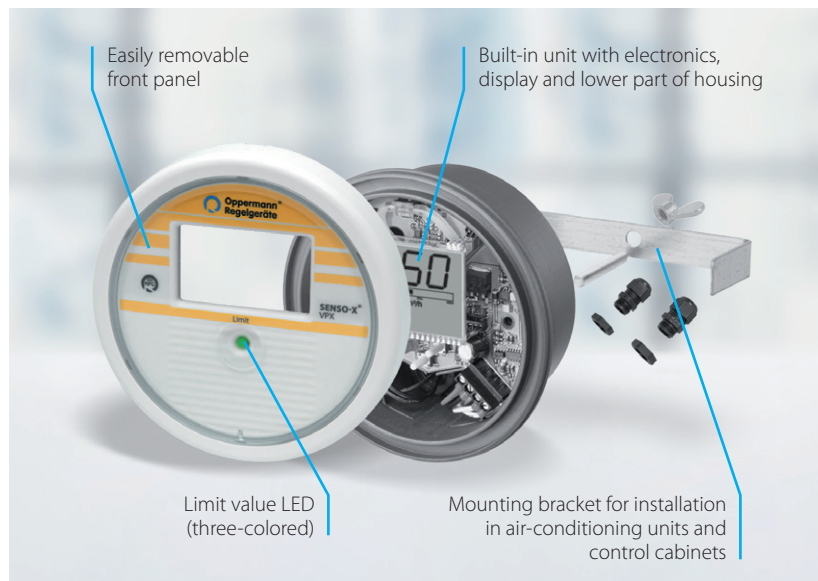
The design solution includes a built-in unit which always remains the same and features integrated electronics and display. The units are optimized for installation in air conditioning units and switch cabinets. All connections for pressure measurement and any electrical connections are located on the rear panel of the unit. The front panel is removable and enables the electrical connections to be installed easily and the parameters to be configured easily via the control buttons or using the NFC reader-writer. The surface-mounted housing enables easy attachment to the outside of ventilation units. In this version, all connections are located at the bottom of the housing.

Clearly readable

The main display is easy to read thanks to large numbers and the residual light reflective display. The bar graph indicates when the limit value (PPX) or the end of the working range (VPX) is approached. In addition, the LED changes color from green to red when the limit value is exceeded (PPX) or fallen below (VPX). A red LED lights up when an upper or lower limit is reached. These limits can be freely selected. In response to measured values which often have relatively large variance, the digital display is damped by averaging the last five measured values.

Simple programming

Programming is performed after removing the front panel via buttons or via NFC technology. A limit value or other parameters can be entered here.



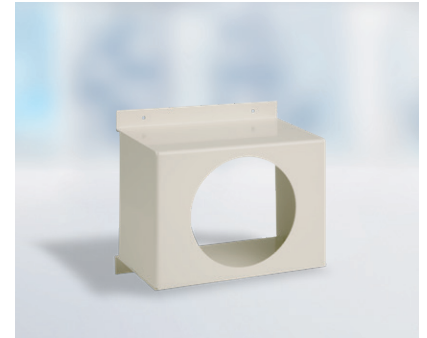
Accessories



NFC reader writer with USB connection



NFC reader writer with Bluetooth interface



Surface-mounted housing

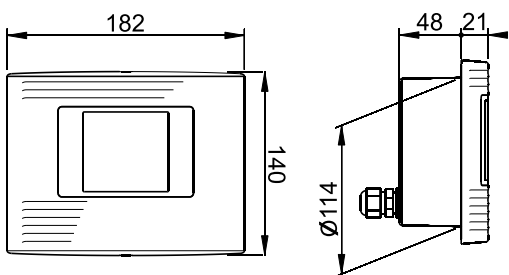


Fitting cover

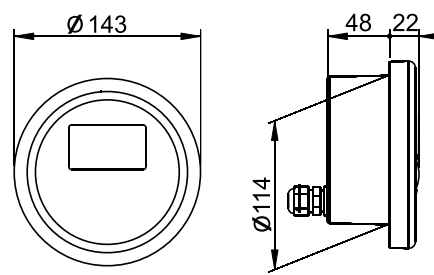


Climaset connection package

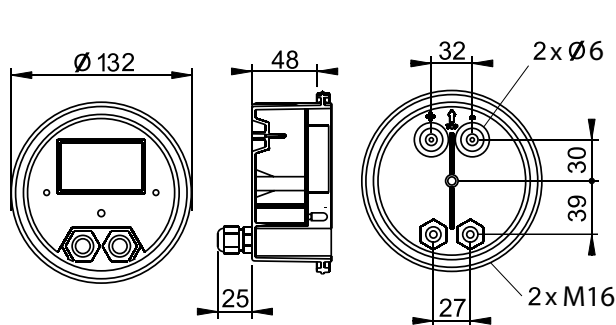
Dimensions:



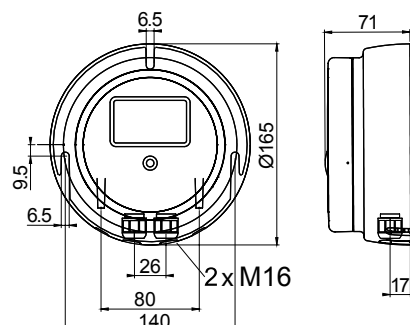
Front panel square type ... 00



Front panel round type ... 01



Housing base



Surface-mounted housing version type ... AP

SENSO-X® technical data

Supply:	24 V AC/DC
Linear output:	0(2) –10 V or 0(4) – 20 mA
(monitor)	Configurable limit values.
Changeover contact:	flooring contact, max. 6 A, 250 VAC; 5 A, 30 VDC
Permissible ambient conditions:	-5 – 65 °C, max. 95 % rh, non-condensing
Storage temperature:	-20 – 70 °C
Housing:	ABS
Protection classes:	Surface-mounted versions (AP) IP 65. Flush-mounted versions IP 54/ with additional seal (accessory) IP 64
Connection nipple:	2 x Ø 6 mm
Accessories:	Various surface-mounted housings and fitting covers. Connection package. NFC reader writer.

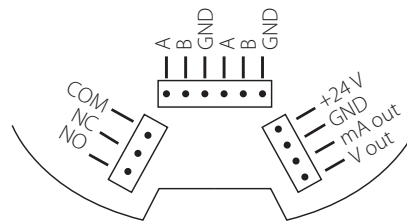
SENSO-X® PPX1000 / PPX4000 Differential pressure transmitter

Linear output:	for differential pressure/ filter contamination
Margin of error:	< 1,0 % of the measuring range

SENSO-X® VPX1000 / VPX4000 Volume flow transmitter

Linear output:	for volume flow
Margin of error:	<1,0 % of the measuring range

Electrical connections



Type	Measuring range	Working range (output signal)	Display/Output*	Limit value monitoring	Application examples Comments
PPX1000	0 – 1,000 Pa	Adjustable in 1 Pa steps from 10 – 1,000 Pa	Pa, %	Adjustable as desired. LED/bar display + switching output when limit exceeded	Differential pressure display/measurement. e.g. filter monitoring
PPX4000	0 – 4,000 Pa	Adjustable in 1 Pa steps from 40 – 4,000 Pa	Pa, %	Adjustable as desired. LED/bar display + switching output when limit exceeded	Differential pressure display/measurement. e.g. filter monitoring
VPX1000	0 – 1,000 Pa	0 – 99,999 m ³ /h Adjustable as desired in 1 m ³ /h steps	m ³ /h, l/s, ft ³ /min	Adjustable as desired. LED/bar display + switching output if below limit	Volume flow measurement
VPX4000	0 – 4,000 Pa	0 – 99,999 m ³ /h Adjustable as desired in 1 m ³ /h steps	m ³ /h, l/s, ft ³ /min	Adjustable as desired. LED/bar display + switching output if below limit	Volume flow measurement

All models optionally with front panel round, square or as surface-mounted housing version. Manual 0-point adjustment as a standard feature.

* Analog output 0(2)–10V or 0(4)–20 mA linear in accordance with the set working range and unit.



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