novasina

The Art of Precision Measurement

Climatic measurement instruments

Catalogue 2017

Pharmaceutical- & Semiconductor-industry

Food industry

Storages & Logistics

www.novasina.com

Table of contents

*Clim*Mate / nSens-HT

Versatile multi-parameter handheld device & data logger

The ***Clim*Mate** is a new, versatile handheld device for detection and storage of various parameters such as air humidity, temperature, absolute pressure, air speed, volumetric flow rate, CO2 as well as water activity and other calculated parameters.

The user gets a complete solution, which is based on the unique high precision Novasina humidity measuring technology and which can be easily extended. The modern state-of-the-art operation and display unit excels with a big, colour LCD touch screen, an easy and intuitive menu structure and logging function capability with up to 2 million data point storage. The ***Clim*Mate** can be connected by an USB interface to a PC and for a data download, visualisation or export using the **SmartGraph III** software.

The device is powered by 4 pcs standard AA LR6 alkaline batteries or alternatively by an USB power supply unit.

LCD touch screen

Technical data	***Clim*Mate** *handheld device (integrated pressure sensor)*
Power supply	4 x 1.5VDC alkaline batteries or USB +5V power supply unit
Power consumption	in operation : approx. 400 mW, battery lifetime approx. 1 year 24h active, configurable Auto-Off function
Technical data instrument	Dimensions : 170 x 62 x 34 mm Weight : 205 gr Admissible altitude : 4000m above sea level
Display	Graphic display : TFT 240 x 320, 65k colours capacitive touch display, backlight (can be switched off) Possibility to display 2 decimal places
Data storage	2 million data points / 200 measuring packages, data download with **Smartgraph III** software incl. data export (e.g. to Excel)
External probes	connected by SDI / UMB-Bus interface absolute pressure, %RH/temperature, flow, CO2

Included probes/sensors in the standard set	- Integrated absolute pressure sensor
	  800….1100 mbar, accuracy @25°C : +/-0.5 mbar
	  Factory calibration certificate (2 pressure points, 1 temp.)
	- nSens-HT: %RH/°C, specifications see separate table
	  Factory calibration certificate (5 x RH, 2 x temperature)

Accessories	*see operating manual & catalogue*
Protection class	IP54
Operating temperature handheld device	0 to 50°C
Storage temperature handheld device	-20….+80°C

***The Clim*Mate-set** contains the following parts :

- 1x **carrying case** for handheld device and probes
- 1x multifunction handheld operation and display device ***Clim*Mate**
- 1x **USB**-cable 1.8m
- 4x **batteries** alkaline LR6 AA, 1,5V
- 1x **nSens-HT-ENS** probe incl. nLink-UMB adapter
- 1x nSens **cable extension** 2m
- 2x **humidity standards** Novasina **SAL-SC 33 & 75%RH** incl. certificates
- 1x **adapter** SAL-SC for nSens probes
- 1x **short operating manual**
- 2x factory calibration certificates (abs. pressure/re. humidity @ 1 temperature)
- 1 x ***Smart*Graph III** software on a CD

nSens-…probes

Using the **nLink-UMB** adapter, various **nSens** probes can be connected to the *Clim*Mate unit. The nSens probe range is continuously extended. But also probes and sensors from other suppliers can be used connecting them to the UMB-Bus interface.

All Novasina nSens probes are intelligent, means the calibration points are stored directly on-board. The probe verification and calibration is done with a PC using the **nSoft-CAL** software.

Technical data	nSens-HT-ENS (rel. humidity & temperature probe) nSens-T-NBS (temperature probe)	
Dimensions	Diameter 13 x Length 101 mm	
Measuring range	Humidity	0 ... 100% RH
	Temperature	-20 … +80°C
Measuring accuracy	Humidity	typical +/-0.5%...+/-2.5% RH
	Temperature	typical +/- 0.1K…+/- 0.2K depending on measurement range
Calibration points	Humidity	13 points over full measurement range
	Temperature	2 points over full measurement range
Digital output	Novasina Bus-System	
Housing material	PVDF black	
Sensor protection	Polyethylene silver oxide filter, nCap-PS (for nSens-HT-ENS) Sensor protection, nCap-E (for nSens-T-NBS)	
Operating temperature	-20 to +80°C	
Storage temperature	-10…+60°C / 10….85% RH (non-condensing)	

nSens-HT / nSens-T

Technical data	nLink-UMB (interface module nSens/UMB-Bus)
Function	Digital conversion Novasina-Bus to UMB-Bus
Dimensions	Diameter 13 x Length 130 mm
Connectors	nSens : 3-pin : UMB : M12- 5-pin
Housing material	PVDF black
Operating temperature	-20…+80°C / 0….100% RH (non-condensing)
Storage temperature	-10 to +60°C / 0…100% RHF (non-condensing)

nLink-UMB

Applications:

Moblie and precise measurement and monitoring of various measurement parameters in the following industries:
- **Semiconductor-, MEMS-, pharmaceutical-, chemical industry**
- **Clean rooms, climatic chambers, mini environments etc.**
- **Paper- and textile production**
- **Laboratories, test benches**
- **Warehouses, archives, server rooms, libraries, museums etc.**
- **Building and HVAC management, control and service**

  and many more…

Set handheld ClimMate & nSens-HT

Set ClimMate with nSens-HT probe

Consisting of:

- Multifunction handheld instrument *Clim*Mate
- nSens-HT-ENS probe incl. nLink-UMB adapter
- USB cable, length 1.8m
- nSens extension cable, length 2m
- 4 alkaline batteries LR6 AA, 1,5V
- Humidity references SAL-SC 33% & 75%RH
- Adapter SAL-SC for nSens probes
- Factory calibration certificates
- Short instruction manual
- Carrying case for instrument, sensors and accessories
- SmartGraph III software on CD

260 1154 ClimMate-Set

Dimensions:	Carrying case 450x360x105mm
Total weight :	2'100 gr

Instrument :
- Dimensions : 170 x 62 x 34mm (ClimMate)
- Weight: 205 gr (ClimMate)

- nSens-HT incl. nLink-UMB Length 170mm x ∅ 13mm

- Absolute pressure sensor integrated Measurement range 800….1'100 mbar

Accessories

nSens-T-NBS probe

Digital nSens-T **temperature** probe with NTC temperature sensor. With nCap-E protection cap.

The calibration *points are saved directly on the probe. The verification* and calibration is done by the separately available nSoft-CAL calibration software. The plug-in probe can be replaced very easily.

Probe delivered in a separate package.

260 1172 nSens-T-NBS
(additional option)

Dimension:	L101mm x ⌀ 13mm Detailed information can be found in the technical data sheet.
Communication:	digital by Bus-system
Fact. calibration:	at 2 temperature points incl. certificate
Verification & Calibration:	with nSoft-CAL software

nSens-VAL-HT simulator

Simulation-plug for the **output of fixed values for relative humidity and temperature.** The setting of the fixed values is done with the separately available nSoft-CAL calibration software.

Simulators are used for checking and validation of climatic installations.

In order to avoid any mix-up, the nSens-VAL-HT simulator disposes of a red coloured plug tip.

260 1126 nSens-VAL-HT

Dimension:	L101mm x ∅ 13mm Detailed information can be found in the technical data sheet.
Communication:	digital by Bus-system
Fact. calibration:	at 2 temperature points incl. certificate
Value setting:	with nSoft-CAL software

nSens extension cable

With 2 plug-in connectors

- 1 connector for nSens probe
- 1 connector for nLink-UMB adapter

nSens cable 2m : 3*0.23mm2 - not halogen free
nSens cable 5m : 3*0.5mm2 - **halogen free !**

260 1201 nSens extension cable, 2m
260 1136 nSens extension cable, 5m

Cable length:	2 or 5m
Connector dimensions:	1x L52mm x ∅15.8mm (nSens probe side) 1x L57mm x ∅16mm (nLink-UMB side)
Temperature range:	-20….+80°C

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The Art of Precision Measurement

nSoft-CAL calibration kit

Windows based software for the verification and calibration of nSens probes with the PC. Runs on Windows 98/2000/XP/Vista/Windows 7 and 8. Incl. nLink-USB connection cable with 1,8m cable length.

respectively with:
- 1 plug for nSens-HT / T / VAL probe
- 1 **USB adapter** plug for PC

260 1094 nSoft-CAL Software

Contains:	- nSoft-CAL Software on CD
	- PDF Operating Manual on CD
	- nLink-USB connection cable for nSens probes with cable lenght of 1,8m

Humidity generators SAL-SC
(with factory calibration certificate)

Reusable humidity standards based on saturated salt solutions in plastic cylinders with moisture permeable membranes. Each salt is delivered in a well-sealed box. Sensor Checks SC are obtainable for the following values (at 25°C) :

6.4 % rh	
11.3 % rh	75.3 % rh
32.8 % rh	84.3 % rh
52.9 % rh	90.1 % rh
57.6 % rh	97.3 % rh

Please consult the operation manual of your instrument to see which points can be calibrated. Other SAL-SC can be used for verification.

260 0978 -> SAL-SC 6
111 0885 -> SAL-SC 11
111 0855 -> SAL-SC 33
111 0857 -> SAL-SC 53
260 0219 -> SAL-SC 58
111 0859 -> SAL-SC 75
251 8965 -> SAL-SC 84
111 0896 -> SAL-SC 90
251 8966 -> SAL-SC 97

Humidity values in the temperature range 15°.... 30°C:

6.9 ..... 6.2%   rh / 15....30°C
11.3 ..... 11.3% rh / 15....30°C
33.3 ..... 32.4% rh / 15....30°C
55.9 ..... 51.4% rh / 15....30°C
60.7 ..... 56.0% rh / 15....30°C
75.6 ..... 75.1% rh / 15....30°C
85.9 ..... 83.6% rh / 15....30°C
90.9 ..... 89.9% rh / 15....30°C
97.9 ..... 97.0% rh / 15....30°C

The precision corresponds to the Greenspan Report 1977 typically +/- 0.3 % rh

Weight :   90 g

Humidity generators SAL-SC
(with UK accreditation and included certficate)

Reusable humidity standards based on saturated salt solutions in plastic cylinders with moisture permeable membranes. Each salt is delivered in a well-sealed box. Sensor Checks SAL-SC are obtainable for the following values (at 25°C) :
11.3 % rh
32.8 % rh
52.9 % rh
75.3 % rh
90.1 % rh
97.3 % rh

111 1044 -> SAL-SC 11 C
111 1037 -> SAL-SC 33 C
111 1040 -> SAL-SC 53 C
111 1035 -> SAL-SC 75 C
111 1032 -> SAL-SC 90 C
260 1275 -> SAL-SC 97 C

Internationally accredited laboratory

UKAS CALIBRATION

All Novasina humidity standards can also be supplied with an internationally recognised certificate from an accredited European laboratory (UKAS England).

Weight :   90 g

Set with 5 humidity generators SAL-SC

Reusable humidity standards SAL-SC in a case delivered incl. the needed adapters for Novasina probes and factory calibration certificates.
Case set contains:
- SAL-SC 11   *(3 items set)*
- SAL-SC 33   *(3 items set)*
- SAL-SC 53
- SAL-SC 75   *(3 items set)*
- SAL-SC 90
- Factory calibration certificates of SAL-SC
- 2 adapters for Novasina probes

111 7847 Case with 5xSAL-SC
111 7841 Case without content

Humidity values in the temperature range 15°... 30°C :

11.3 ..... 11.3% rh / 15....30°C
33.3 ..... 32.4% rh / 15....30°C
55.9 ..... 51.4% rh / 15....30°C
75.6 ..... 75.1% rh / 15....30°C
90.9 ..... 89.9% rh / 15....30°C

The precision corresponds to the Greenspan Report 1977 typically +/- 0.3 % rh

Weight :   700 g

Adapter SAL-SC
- for nSens probes
- for TFF 20 capacitive probes *(PN 260 1215)*

Plastic adapter for humidity standards. Used for diameter reduction and radial sealing around the nSens probe with diameter 13mm.

With integrated "**green rubber**" sealing ring.

260 1143 Adapter SAL-SC / nSens
260 1036 Adapter SAL-SC / TFF 20

Dimension :	Out diam.30/In.diam 13 mm (nSens) Out diam.30/in.diam 12 mm (TFF 20)
Weight :	5 g
Material :	Thermoplastic resin

USB power supply *to ClimMate*

Power supply with USB socket for ClimMate. If powered by this power supply, the internal AA batteries are only for backup in case of a power failure.

Remark :
1,8m USB cable already included in ClimMate set

260 0872 **USB power supply**

Dimensions:	55x25x80 mm
Weight:	50 g
Input power :	100...260V AC 50/60 Hz
Output power :	+5V DC USB
	1200mA / 6W
Housing:	plastic ABS / IP40

Digital capacitive humidity/temp. probe

Robust calibrated humidity/temperature probe with digital UMB interface for direct connection to „*Clim*Mate".
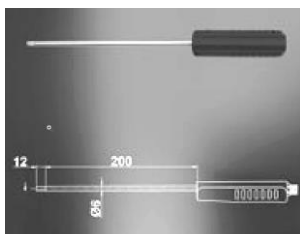
Remark :
This probe type does not require an nLink-UMB adapter. SAL-SC adapter ring PN : 260 1036.

260 1215 **Digital capacitive probe** TFF 20

Dimensions :	Length 80mm x ⌀ 12mm
Meas range :	0....100 %RH / -40...+80°C
Accuracy :	+/-2.0% RH (0..90%)
	+/- 3.0% RH (90...100%)
	+/-0.2°K
Connector :	M12 with screw ring

SDI airflow & temperature probe
e.g. for clean room applications **(range 0…..2m/s)**

Digital airflow probe with thermic heating element measuring principle. With robust thin-film sensor. The flow direction has a considerable influence on the measurement accuracy (vector).

The probe was calibrated for <u>very low</u> airflows in specific airflow tunnels!

260 1218 SDI airflow probe **0….2m/s**

Dimension housing:	117 x 38 mm
Dimension probe:	200mm x ⌀ 6mm
Weight:	approx. 200 gr
Temp. range:	0…50°C / 0…95%RH
Meas. range :	0….2.0 m/s
Accuracy:	+/-0.08m/s
	+1% of meas.value
Resolution:	0.01m/s
Temperature:	-20…70°C
Accuracy:	+/-0.7°C / 0…..50°C
Connector:	M12 with screw ring including 2m cable

SDI thermic airflow probe
e.g. for HVAC applications **(range 0…..20m/s)**

Digital airflow probe with thermic heating element measuring principle. With robust thin-film sensor. The flow direction has a considerable influence on the measurement accuracy (vector).

The probe was calibrated for <u>low</u> airflows in specific airflow tunnels!
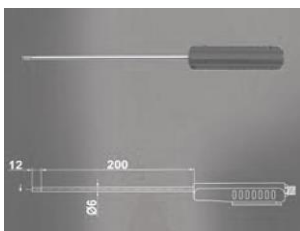
260 1220 SDI airflow probe **0….20m/s**

Dimension housing:	117 x 38 mm
Dimension probe:	200mm x ⌀ 6mm
Weight:	approx. 200 gr
Temp. range:	0…50°C / 0…95%RH
Meas. range :	0….20.0 m/s
Accuracy:	+/-0.2 m/s
	+2% of meas.value
Resolution:	0.01m/s
Temperature:	-20…70°C
Accuracy:	+/-0.7°C / 0…..50°C
Connector:	M12 with screw ring including 2m cable

Digital CO2 probe
for maintenance and monitoring

This digital state-of-the-art CO2 probe has been developed specifically for mobile devices and has a extremely low power consumption. The probe incorporates the dual wavelength NDIR CO_2 sensor, which compensates for ageing effects, is highly insensitive to pollution and stands for outstanding long term stability

Indication values of CO2 concentrations:

~ 40.000ppm	Part of human exhaust breath (20l CO2/h)
~ 5.000ppm	Limit of CO2 concentration at workplace
> 1.000ppm	Fatigue and lack of concentration become noticeable
~ 1.000ppm	Recommended limit for room air
~ 400ppm	Fresh air

260 1222 **CO2- probe** with M12 connector

Dimensions:	96 x ⌀ 18.5 mm
allowed temp.:	-40..60°C
allowed RH :	0..100%RH (non condensing)
allowed atm press.:	850...1100hPa
Meas. range:	0….5000 ppm
Accuracy:	at 25°C & 1013 mbar <+/-50ppm +3% of measured value
Protection:	IP65
Connector :	M12 with screw ring

Protection bag

Robust protection bag for storage and transporation of handheld device, probe and humidity calibration references SAL-SC. The bag can be carried on the shoulder or fixed to the belt. A Velcro fastener avoids the instrument to fall out of the bag.

111 8957 Protection bag

Dimension	: 250 x 200 x 40mm
Weight	: 185 g (empty)
Material	: fabrics cushioned, 2 lateral pockets for 2 pcs SAL-SC

Spare parts / options

Replacement instrument *Clim*Mate

Soft-Bag

Single instrument without any accessories as spare part to **set *Clim*Mate**. With capacitive Touch-LCD 320 x 240 dot display, internal datalogger memory and atm. pressure sensor. Power supply by USB or 4 x alkaline batteries 1,5V AA LR6.

Robust housing made of ABS. Delivered including batteries, USB cable, operating manual, factory calibration certificate and **protection bag**.

260 1206 -> replacement instr.

Dimension: 170 x 62 x 34 mm

Weight   : approx.. 205 gr

TFT Display 54 x 41 mm illuminated with touch surface

With integrated absolute pressure sensor : 800....1100mBar (incl. factory calibration certificate)

max. elevation : 4'000m above sea level

Only available as single device including protection bag

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nSens-HT-ENS probe *(New / Renewed)*

Replacement probes can be ordered as new or renewed version.

Important:
The renewed probe is only **delivered in a replacement mode** and can only be ordered if the old probe is returned to Novasina.

Probes delivered in a separate package.

260 1171 nSens-HT-ENS *(NEW)*
260 1166 nSens-HT-ENS *(RE-NEWED)*

Dimension:	L101mm x ⌀ 13mm Detailed information can be found in the technical data sheet.
Communication:	digital by Bus-system
Fact. calibration:	at 5 humidity points at 1 temprature
	resp. 2 temperature points incl. certificate
Verification & Calibration:	with nSoft-CAL software

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nLink-UMB adapter for nSens probe

Conversion adapter from nSens probe to ClimMate UMB-Bus connector.

Important :
Each nSens probe requires a nLink-UMB adapter to be connected to the ClimMate.

260 1063 nLink-UMB

Dimension	: 20 x 60 mm
Weight	: approx.. 30 g
Connector	: 5 pole screwed for UMB-Bus side and 3 pole for nSens-HT side

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Spare carrying case for *Clim*Mate set

NEW

Empty carrying case for ***Clim*Mate** with foam material inserts for probes, SAL-SC humidity standards and extension cable.

<u>Remark :</u>
Carrying case has no key or combination lock

WHITE / MAGENTA

260 1224 Spare carrying case

Dimension: 450x360x105mm

Weight : 1'200 gr (empty)

Material :
- PVC material
- Foam plastic material insert

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nLink-USB adapter

Adapter with 1,8m cable for connection of nSens probes.

respectively with:
- 1 plug for nSens-HT / nSens-T probe
- 1 USB adapter plug for PC

Contains:	nLink-USB connection cable for nSens probes with cable length of 1,8m

260 1075 nLink-USB spare part

nCap-P filter protection cap

With dust protection filter insert.

For optimal mechanical sensor protection as well as protection against dust.

For particle sizes up to 10 μm.

Dimension:	$\varnothing$12.6mm x L36.1mm
Housing material:	PVDF black
Filter insert:	Polyethylene

260 1146 nCap-P Filter

nCap-PS filter protection cap

With silver oxide coated filter insert.

For optimal mechanical sensor protection as well as protection against dust.

Additional basic chemical sensor protection.

For particle sizes of <10 μm.

Dimension:	$\varnothing$12.6mm x L36.1mm
Housing material:	PVDF black
Filter insert:	Polyethylene/silver oxide

260 1147 nCap-PS Filter

nCap-E protection cap

Protection cap without filter insert.

Exclusively for mechanical protection.

Recommended only for nSens-T temperature probes.

Dimension:	$\varnothing$12.6mm x L36.1mm
Housing material:	PVDF black
Filter insert:	none

260 1188 nCap-E

*Quanta*Dat / nSens

QuantaDat Multisensor-Transmitter

This modular designed transmitter ,with multi sensor technology, is used as a display and signal output unit with 4 sensor channels and 4 analogue outputs. This allows the management of 4 measurement points by only 1 transmitter. The sensor identification is made automatically and the channels can be assigned and configured using the onboard menu.

The integral climatic processor (Mollier chart) enables display and output of values such as dew point temperature, absolute humidity, specific enthalpy, mixing ratio etc. An RS-485 interface is integrated as standard. Bus interfaces and relay switches can be assembled with modular configuration.

Technical data	*Quanta*Dat and *Quanta*Dat-RL
Power supply	24V +/- 15% AC or DC (galvanic isolated)
Power consumption	max. approx.3W
Display	Graphical display with LED backlight
Analogue outputs	4 scalable analogue outputs, current 0/4..20mA or voltage 0/2..10V
Digital outputs	Interface provided 2 relay contacts (for version QuantaDat-RL)
Housing material	ABS - lid blue RAL 5014, bottom grey RAL 7035
Protection class	IP54
Working temperature	0 to 50°C

nSens-xx probes

An integral component of the system is the digital **nSens-HT** humidity/temperature and nSens-T temperature sensor which works is over the whole measurement range with high accuracy and linear response characteristics . The calibration data is stored direct onto the sensor. The verification/calibration is performed by PC using the nSoft-CAL software. These plug-in probes are quickly replaced on site and the newly calibrated system may be put back into use again quickly, maintaining highest accuracy.

nSens-HT-ENS

nSens-T-NBS

Technical data	nSens-HT-ENS (humidity & temperature probe) nSens-T-NBS (temperature probe)	
Measurement range	Humidity	0 ... 100% RH
	Temperature	-20 … +80°C
Measurement accuracy	Humidity	typ.+/-0.5%...+/-2.5% RH
	Temperature	typ. +/- 0.1K…+/- 0.2K depending on on measurement range
Number of cal. points	Humidity	13 points over the full meas. range
	Temperature	2 points over the full meas. range
Digital output	Novasina Bus-system	
Housing material	PVDF black	
Sensor protection	Standard - polyethylene dust filter (nSens-HT-ENS) Plastic protection cap (nSens-T-NBS)	
Working temperature	-20 to +80°C	

Applications:
- **Monitoring and control of climatic processes in clean rooms, climatic chambers, mini-environments etc.**
- **Climatic control in paper- and textile productions**
- **Climatic monitoring and control in laboratories, calibration rooms etc.**
- **Optimisation of combustion processes in gas turbines**
- **Monitoring and control of climatic parameters in storages, server rooms and many more…**

*Quanta*Dat Multisensor Transmitter

QuantaDat Set

Multisensor capable transmitter system with 24V AC/DC power supply. Plastic housing blue/grey with IP 54 protection class.

Standard set contains all parts for the installation (24VDC power supply must be provided) :

- Transmitter unit *Quanta*Dat
- nSens cable with 5m of length
- nSens-HT ENS sensor incl. filter cap
- Including packaging

Operation manual can be downloaded from www.novasina.ch
(PDF document)

260 1314 QuantaDat set

Dimension:	W150xH165xD54mm
Power supply:	24V +/- 15% AC/DC
Power consumption:	max. 3 W DC max. 3.0 W
Outputs:	4 x analogue U/I 0...10V / 2...10V 0...20mA / 4..20mA 1 digital interface
Version:	QuantaDat-RL with additional 2 relays
Operating cond.:	0.....100% RH -20°…+80°C
Calculated parameters:	-Mixing ratio -Water vap. partial pressure -Dew point temp. -Specific Enthalpy -Absolute Humidity

QuantaDat / QuantaDat-RL

Multisensor capable transmitter system with 24V AC/DC power supply. Plastic housing blue/grey with IP 54 protection class.

2 Options :
- QuantaDat with 4 analogue OUT
- QuantaDat-RL with 4 analogue OUT and 2 relay contacts (24VDC/3A)

Suitable for connection of several remote nSens-HT or nSens-T probes with cable length up to 100m.

260 1087 QuantaDat
260 1161 QuantaDat-RL
(with relay)

Dimension:	W150xH165xD54mm
Power supply:	24V +/- 15% AC/DC
Power consumption:	max. 3 W DC max. 3.0 W
Outputs:	4 x analogue U/I 0...10V / 2...10V 0...20mA / 4..20mA 1 digital interface
Version:	QuantaDat-RL with additional 2 relays
Operating cond.:	0.....100% RH -20°…+80°C
Calculated parameters:	-Mixing ratio -Water vap. partial pressure -Dew point temp. -Specific Enthalpy -Absolute Humidity

nSens-xx Probes & Simulators

nSens-HT-ENS probe
(with factory calibration certificate)

Digital nSens-HT **humidity & temperature** probe with resistive-electrolytic humidity and NTC temperature sensor. With nCap-PS filter protection cap.

The calibration points are saved directly on the probe. The verification and calibration is done by the separately available nSoft-CAL calibration software. The plug-in probe can be replaced very easily.

260 1171 nSens-HT-ENS

Dimension:	L101mm x ⌀ 13mm Detailed information can be found in the technical data sheet.
Communication:	digital by Bus-system
Fact. calibration:	at 5 humidity at 1 temperature incl.certificate
Verification & Calibration:	with nSoft-CAL software

nSens-T-NBS probe
(with factory calibration certificate)

Digital nSens-T **temperature** probe with NTC temperature sensor. With nCap-E protection cap.

The calibration points are saved directly on the probe. The verification and calibration is done by the separately available nSoft-CAL calibration software. The plug-in probe can be replaced very easily.

260 1172 nSens-ï-NBS

Dimension:	L101mm x ⌀ 13mm Detailed information can be found in the technical data sheet.
Communication:	digital by Bus-system
Fact. calibration:	at 2 temperature points incl. certificate
Verification & Calibration:	with nSoft-CAL software

nSens-VAL-HT simulator

Simulation-plug for the **output of fixed values for relative humidity and temperature.** The setting of the fixed values is done with the separately available nSoft-CAL calibration software.

Simulators are used for checking and validation of climatic installations.

In order to avoid any mix-up, the nSens-VAL-HT simulator disposes of a red coloured plug tip.

260 1126 nSens-VAL-HT

Dimension:	L101mm x ⌀ 13mm Detailed information can be found in the technical data sheet.
Communication:	digital by Bus-system
Value setting:	with nSoft-CAL software

nSens-HT-ENS renewed probe (with factory calibration certificate)

Renewed digital nSens-HT-ENS **humidity & temperature** probe with resistive-electrolytic humidity and NTC temperature sensor. With nCap-PS filter protection cap.

Important:
This probe is only **delivered in a replacement mode** and can only be ordered if the old probe is returned to Novasina.

Remark: The measurement quality corresponds to a new probe.

260 1166 nSens-HT-ENS *(renewed)*

Dimension:	L101mm x ⌀ 13mm Detailed information can be found in the technical data sheet.
Communication:	digital by Bus-system
Fact. calibration:	at 5 humidity and at 1 temperature incl. certificate
Verification & Calibration:	with nSoft-CAL software

nSens cable systems

nSens cable *(for Quanta*Dat *wiring)*

Cable 3*0.5mm2, very robust, halogen free with plug-in coupling to nSens-HT und nSens-T probes.

On the probe side with cable plug, on the transmitter side with end sleeves for easy mounting in the terminals.

Remark:
The cables are delivered including the mounting material for probe fixation to wall or to ducts (Part no. 260 1083)

260 1080 nSens-cable 5m
260 1079 nSens-cable 10m
260 1078 nSens-cable 30m
260 1225 nSens-cable 60m
260 1226 nSens-cable 100m

Cable lengths:	5 / 10 / 30 / 60 / 100m
Dimension cable plug:	L52mm x ⌀ 15.8mm Detailed information can be found in the technical data sheet.
Temperature range:	-40°C to +90°C
Characteristics:	Detailed information can be found in the technical data sheet.

nSens-cable extension

Cable 3*0.5mm2, very robust, halogen free with 2 plug-in couplings.

respectively with:
- 1 plug for nSens-HT / nSens-T probe
- 1 plug for nSens-cable cable plug

260 1136 nSens cable 5m

Cable length:	5m
Dimension cable plug:	1x L52mm x ⌀15.8mm (on nSens probe side) 1x L57mm x ⌀16mm (on nSens cable side)
	Detailed information can be found in the technical data sheet. Temperature
range:	see nSens-cable

nSoft-CAL calibration kit

nSoft-CAL calibration kit

Windows based software for the verification and calibration of nSens probes with the PC. Runs on Windows 98/2000/XP/Vista/Windows 7 and 8.

Incl. nLink-USB connection cable with 1,8m cable length.

respectively with:
- 1 plug for nSens-HT / nSens-T probe
- 1 USB adapter plug for PC

260 1094 nSoft-CAL Software

Contains:	- nSoft-CAL Software on CD
	- PDF Operating Manual on CD
	- nLink-USB connection cable for nSens probes with cable lenght of 1,8m

Accessories and Spare parts

Humidity generators SAL-SC
(with factory calibration certificate)

Reusable humidity standards based on saturated salt solutions in plastic cylinders with moisture permeable membranes. Each salt is delivered in a well-sealed box. Sensor Checks SC are obtainable for the following values (at 25°C) :

6.4 % rh	
11.3 % rh	75.3 % rh
32.8 % rh	84.3 % rh
52.9 % rh	90.1 % rh
57.6 % rh	97.3 % rh

260 0978 -> **SAL-SC 6**
111 0885 -> **SAL-SC 11**
111 0855 -> **SAL-SC 33**
111 0857 -> **SAL-SC 53**
260 0219 -> **SAL-SC 58**
111 0859 -> **SAL-SC 75**
251 8965 -> **SAL-SC 84**
111 0896 -> **SAL-SC 90**
251 8966 -> **SAL-SC 97**

Please consult the operation manual of your instrument to see which points can be calibrated. Other SAL-SC can be used for verification.

Humidity values in the temperature range 15°.... 30°C:

6.9 ..... 6.2% rh / 15....30°C
11.3 ..... 11.3% rh / 15....30°C
33.3 ..... 32.4% rh / 15....30°C
55.9 ..... 51.4% rh / 15....30°C
60.7 ..... 56.0% rh / 15....30°C
75.6 ..... 75.1% rh / 15....30°C
85.9 ..... 83.6% rh / 15....30°C
90.9 ..... 89.9% rh / 15....30°C
97.9 ..... 97.0% rh / 15....30°C

The precision corresponds to the Greenspan Report 1977 typically +/- 0.3 % rh

Weight :   90 g

Humidity generators SAL-SC
(with UK accreditation and included certificate)

Reusable humidity standards based on saturated salt solutions in plastic cylinders with moisture permeable membranes. Each salt is delivered in a well-sealed box. Sensor Checks SAL-SC are obtainable for the following values (at 25°C) :
11.3 % rh
32.8 % rh
52.9 % rh
75.3 % rh
90.1 % rh
97.3 % rh

111 1044 -> **SAL-SC 11 C**
111 1037 -> **SAL-SC 33 C**
111 1040 -> **SAL-SC 53 C**
111 1035 -> **SAL-SC 75 C**
111 1032 -> **SAL-SC 90 C**
260 1275 -> **SAL-SC 97 C**

Internationally accredited laboratory

All Novasina humidity standards can also be supplied with an internationally recognised certificate from an accredited European laboratory (UKAS England).

Weight :   90 g

Set with 5 humidity generators SAL-SC

Reusable humidity standards SAL-SC in a case delivered incl. the needed adapters for Novasina probes and factory calibration certificates.
Case set contains:
- SAL-SC 11   - SAL-SC 75
- SAL-SC 33   - SAL-SC 90
- SAL-SC 53
- Factory calibration certificates of SAL-SC
- 2 adapters for Novasina probes

111 7847 **Check set** *(standard)*
111 7841 **Case without content**

Humidity values in the temperature range 15°... 30°C :

11.3 ..... 11.3% rh / 15....30°C
33.3 ..... 32.4% rh / 15....30°C
55.9 ..... 51.4% rh / 15....30°C
75.6 ..... 75.1% rh / 15....30°C
90.9 ..... 89.9% rh / 15....30°C

The precision corresponds to the Greenspan Report 1977 typically +/- 0.3 % rh

Weight :   700 g

Adapter SAL-SC for nSens-HT probes

Plastic adapter for humidity standards. Used for diameter reduction and radial sealing around the nSens probe with diameter 13mm.

With integrated **green coloured rubber** sealing ring.

260 1143 **Adapter SAL-SC / nSens**

Dimension :   Out.diam.30/In.diam.13 mm

Weight :   5 g

Material :   Thermoplastic resin

Thermal insulation styrofoam box

A styrofoam box providing optimal insulation and temperature stabilisation of a SAL-SC check during the calibration procedure. Consisting of two half-covers for simple temporary mounting.

111 1302 **Styrofoam box**

Dimension :   100 x 65 x 50 mm

Weight :   10 g

Material :   thermal insulating
              styrofoam PPE

External power supply

External power supply with exchangeable plugs EU/US/JP

Input : plug for standard sockets EU/US/JP (90..260VAC)
Ouput : connection to QuantaDat transmitter (24VDC)

Primary side :	voltage range 90 ... 264VAC plugs EU/US/JP
Secondary side:	Voltage 24V DC +/- 5% Bared cable ends prepared for connection
Weight:	90 gr

252 4210 External power supply

nCap-P filter protection cap

With dust protection filter insert.

For optimal mechanical sensor protection as well as protection against dust.

For particle sizes up to 10 µm.

Dimension:	∅12.6mm x L36.1mm
Housing material:	PVDF black
Filter insert:	Polyethylene

260 1146 nCap-P filter

nCap-PS filter protection cap

With silver oxide coated filter insert.

For optimal mechanical sensor protection as well as protection against dust.

Additional basic chemical sensor protection.

For particle sizes of < 10 µm.

Dimension:	∅12.6mm x L36.1mm
Housing material:	PVDF black
Filter insert:	Polyethylene/silver oxide

260 1147 nCap-PS filter

nCap-E protection cap

Protection cap without filter insert.

Exclusively for mechanical protection.

Recommended only for nSens-T temperature probes.

Dimension:	∅12.6mm x L36.1mm
Housing material:	PVDF black
Filter insert:	none

260 1188 nCap-E

Weather protection shield

For outdoor applications such as meteorological stations or similar.

Including all mounting accessories and fixation of probes with diameter 13…20 mm.

Can be fixed to poles with diameter 25…50 mm.

Dimension:	270x220x∅130mm
Material:	UV stabilised, thermoplastic slats, painted steel construction
Weight:	650 g

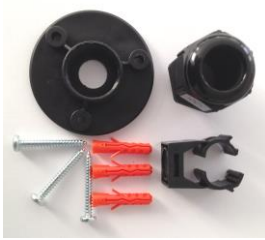**111 6812** Weather protection shield

nLink-USB adapter

Adapter with 1,8m cable for connection of nSens probes.

respectively with:
- 1 plug for nSens-HT / nSens-T probe
- 1 USB adapter plug for PC

Contains:	nLink-USB connection cable for nSens probes with cable length of 1,8m

260 1075 nLink-USB spare part

Wall and duct mounting kit

For probe fixation to walls and inside ducts.

Fixation:
- for wall mounting clip by fixing the bracket
- for duct mounting flange by tightening the compression fitting

The clip and the flange can be mounted with the delivered screws.

Remark:
The duct flange seals up to a pressure of 3 bar.

260 1083 Mounting kit for nSens

Dimension:	- Wall clip H32xW20.6xD17.1mm
	- Duct flange ⌀ 60mm Depth approx. 40mm including fitting screw-hole-circle ⌀ 45mm
Material:	Polyamide black

Wall mounting kit with spacer

For distance of 56 mm between wall and centre of probe.

Recommended for probe mounting on temperature emitting walls.

Including all mounting material.

260 1152 Mounting kit with spacer

Dimension:	- Wall clip H32xW20.6xD17.1mm
	- Spacer H35xW30xD20mm
Material:	Polyamide black

Wall mounting kit

For distance of 20 mm between wall and centre of probe.

Including all mounting material.

260 1165 Mounting kit

Dimension:	H32xW20.6xD17.1mm
Material:	Polyamide black

*Quanta*Dat housing bottom

As spare part.

Including all fittings, cable fixation bar and sealing membrane.

260 1173 Housing bottom

Dimension:	W150 x H140mm
Material:	ABS grey RAL 7035

*Quanta*Dat conncetor set

Spare part set including connector set for QuantaDat PCB for power supply, digital- and analogue outputs.

260 1178 Connector set

Connectors:
- 3-Pin   -> Relays
- 2x 4-Pin   -> AO
- 1 x 2-Pin   -> Power supply
- 2 x 3-Pin   -> nSens&RS485

nSens-… for BUS networks

This adapter system allows a protocol transformation and hence nSens probes can be easily integrated in new and existing bus networks (Modbus). The operator benefits from a simple and fast integration in combination with the high measurement accuracy and linearity of the nSens sensors. This solution offers a cost efficient alternative to the use of transmitter systems with analogue output signals.

Applications:
- **Clean rooms**
- **Isolators**
- **Operating theaters**
- **Labs, calibration rooms**

Industries:
- **Pharmaceutical**
- **Life Science**
- **Semiconductor**
- **Hospitals**
- **Pharmacies etc.**

Your advantages:
- Fully integration of measurement points in the network
- Reliable digital signal transmission
- Simple to install thank to small dimensions
- Probe can be replaced fast and easy thanks to the with connection system
- High measurement accuracy and linearity
- Cost efficient and flexible solution
- Simple and fast to verify and calibrate the measuring probes

nSens network solutions

for direct integration in a Modbus network

nSens-HT-ENS and nSens-T-NBS probe

Digital **nSens-HT humidity & temperature** probe with resistive-electrolytic humidity- and NTC temp. sensor. With nCap-PS protection filter cap.

Digital **nSens-T temperature** probe with high quality NTC temperature sensing element and nCap-E protection cap.

The calibration points are saved directly on the probe. The verification and calibration is done by the separately available nSoft-CAL calibration software. The plug-in probe can be replaced very easily.

Probes delivered in a separate package.

260 1171   **nSens-HT-ENS**
260 1172   **nSens-T-NBS**

Dimensions:	L101mm x ∅ 13mm Detailed information can be found in the technical data sheet.
Communication:	digital by Bus-system
Fact. calibration: (nSens-T)	at 2 temperature points incl. certificate
Fact. calibration: (nSens-HT)	at 5 humidity points incl. certificate
Verification & Calibration:	with nSoft-CAL software

nLink-Modbus adapter for nSens (HT/T)

Signal conversion adapter from nSens probes to Modbus.

Remark: each nSens probe requires 1 nLink-Modbus for connection.

260 1095 **nLink-Modbus adapter**

Dimensions:	20 x 60 mm
Weight:	approx. 30 g
Connector:	5 pole screwed for Modbus and 3 pole for nSens

Modbus-cable - length 2m

For connection of a nLink-Modbus adapater to a Modbus network

- Adapter-side with M12/4 connector
- Network-side with open cable head

260 1135 **Bus cable length 2m**

|	
Cable length:	2m
Weight:	approx. 100 g
Connector:	M12 / 4 respectively open cable head

*Hygro*Guard 30
*Clima*Log30/*Data*Log 30

This new data logger series excel with useful functions and high versatility. As stand-alone devices or integrated in PC-networks the *Hygro*Guard 30, *Clima*Log 30 and *Data*Log 30 can be used in various applications for climatic data measurement and recording. The high storage capacity of 3'2 Mio data points and the AA batteries with >1 year of operation life make this data logger system ideal for many applications. The data visualisation and device configuration is done by the Windows software **SmartGraph III** which is included in the delivery.

Novasina data logging product range:

Hygro*Guard 30   with internal sensors for **humidity and temperature**

*Clima*Log 30   with internal sensors for **humidity, temperature and atm. pressure sensors**

*Data*Log 30   with **no internal sensors** ready for 10 signals for monitoring systems. Data transmission is done via a UMB-Bus interface for the ..Maxx series or 2 x 4..20 mA. *(e.g. 4 x StatMaxx + 2 PascalMaxx)*
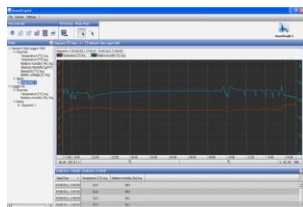
Features:
- High data storage capacity / large format LCD / flexible display
- USB & **Ethernet interface (TCP/IP)**
- connectable with external sensors via UMB bus for monitoring networks
- versatile and intuitive software for data analysis

	Model		
	***Hygro*Guard 30**	***Clima*Log 30**	***Data*Log 30**
MEASURED PARAMETERS			
Temperature	X	X	external sensors
Relative humidity	X	X	external sensors
Absolute humidity	X (calculated)	X (calculated)	external sensors
Dew point temp..	X (calculated)	X (calculated)	external sensors
Barometric air pressure		X	external sensors
Analogue inputs (voltage / current)			2xAI + 8x Bus
FUNCTIONS - DEVICE			
Power supply battery	X	X	X
Power supply USB	X	X	X
Measured data storage	3'200'000	3'200'000	3'200'000
Typ. battery life	> 1 year	> 1 year	> 1 year
LC-Display	X	X	X
One button operation	X	X	X
1-point calibration by operator	X	X	X
°C/°F switchable	X	X	X
Optical/acoustical alarm	X	X	X
Date / time	X	X	X
Records MIN/MAX/AVG	X	X	X
SmartGraph 3 evaluation software	X	X	X
UMB bus for external sensors			X (8x signal)
FUNCTIONS - SmartGraph III			
Graphical representation	X	X	X
Numerical data table	X	X	X
Print function	X	X	X
Export function (Excel etc.)	X	X	X
Printouts of all measurement sites	X	X	X
User administration	X	X	X
Administration of up to 255 a loggers	X	X	X
Windows API interface	X	X	X

Data logger systems:

Dimensions	: 166x78x32 mm
Weight	: 250 g
Power supply	: 4 x LRG AA Mignon batteries, USB - life time > 1 year
Housing/protection	: plastic ABS / IP40
Data storage	: 16 MB, 3'200'000 measured values
Interface	: USB, LAN (Ethernet)
Measurement rate	: 10/30s, 1/10/12/15/30 min., 1/3/6/12/24h
Storage rate	: 1/10/12/15/30min., 1/3/6/12/24h

Humidity measurement:
Capacitive measurement principle

Measuring range	: 10...95% RH *not condensing*
Accuracy	: +/- 2.0%rh
Resolution	: 0.5%rh

Temperature measurement:
NTC measurement principle

Measuring range	: -20....50°C
Accuracy	: +/- 0.3°C (0...40°C) otherwise +/- 0.5°C
Resolution	: 0.1°C

Air pressure measurement:

Measuring range	: 300…1300hPa abs.
Accuracy	: +/- 0.5hPa (700…1100hPa)
Resolution	: 0.1hPa

Applications:
- **HVAC installations, clean rooms, calibration and QA laboratories**
- **Museums, archives, libraries, storage rooms**
- **Building Management Systems and monitoring systems**
- **Pharmaceutical- chemical-, biotechnology, food-industry**

*Hygro*Guard 30 / *Cima*Log 30 / *Data*Log 30

*Hygro*Guard 30 Data logger system

Battery powered data logger for recording of **humidity, temperature/dew point** with 16 MB data storage (3'200'000 values) with visualisation and configuration software and big LC-Display 90 x 64 mm.

Delivery includes:
- HygroGuard 30 device incl. 4 batteries
- 1,8m USB data transfer cable
- SmartGraph III software (on included CD)
- Operation manual (on the CD)
- Novasina factory calibration certificate

260 0867 *Hygro*Guard 30

Dimensions: 166x78x32 mm

Weight: 250 g

Power supply: 4 x LRG AA Mignon batteries (life time > 1 year)

Housing/protection: plastic ABS / IP40

Storage: 3'200'000 measured val.

Interface: USB, LAN (Ethernet)

Meas. rate: 10/30s,1/10/12/15/ 30min., 1/3/6/12/24h

Storage rate: 1/10/12/15/30min., 1/3/6/12/24h

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*Cima*Log 30 Data logger system

Battery powered data logger for recording of **humidity, temperature/dew point and absolute pressure** with 16 MB data storage (3'200'000 values) with visualisation and configuration software and big LC-Display 90 x 64 mm.

Delivery includes:
- ClimaLog 30 device incl. 4 batteries
- 1,8m USB data transfer cable
- SmartGraph III software (on included CD)
- Operation manual (on the CD)
- Novasina factory calibration certificate

260 0866 *Cima*Log 30

Dimensions: 166x78x32 mm

Weight: 250 g

Power supply: 4 x LRG AA Mignon batteries (life time > 1 year)

Housing/protection: plastic ABS / IP40

Storage: 3'200'000 measured val.

Interface: USB, LAN (Ethernet)

Meas. rate: 10/30s,1/10/12/15/ 30min., 1/3/6/12/24h

Storage rate: 1/10/12/15/30min., 1/3/6/12/24h

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*Data*Log 30 Data logger system

Battery powered data logger for recording max. 10 channels (UMB interface and 2 analogue input U/I). With 16 MB data storage (3'200'000 values) with visualisation and configuration software and big LC-Display 90 x 64 mm.

Recommended external RH/T sensors from Novasina are the *Stat*Maxx "UMB" or HygroMaxx / TempMaxx / PascalMaxx models *(see accessories below)*

Delivery includes:
- DataLog 30 device incl. 4 batteries
- 1,8m USB data transfer cable
- SmartGraph III software (on included CD)
- Operation manual (on the CD)
- Novasina factory calibration certificate

260 0868 *Data*Log 30

Dimensions: 166x78x32 mm

Weight: 250 g

Power supply: 4 x LRG AA Mignon batteries (life time > 1 year)

Housing/protection: plastic ABS / IP40

Storage: 3'200'000 measured val.

Interface: USB, LAN (Ethernet) and UMB *(universal measurement bus)*

Total : max. 10 channels
        8 channels via UMB
        2 channels 0…10V/4…20mA

Meas. rate: 10/30s,1/10/12/15/ 30min., 1/3/6/12/24h

Storage rate: 1/10/12/15/30min., 1/3/6/12/24h

Accessories

for *Hygro*Guard 30 / *Cima*Log 30

*Hygro*Guard 30 DAkkS calibration

Calibration certificate according to the official DAkkS accredited procedure.

Calibration at 3 RH points and 1 temperature point.

260 0871
HygroGuard 30 DAkkS certificate

DAkkS calibration including official certificate

Rel.humidity : 20%, 50%, 80%rh
                 at 20°C
Temperature : 20°C

*Clima*Log 30 DAkkS calibration

Calibration certificate according to the official DAkkS accredited procedure.

Calibration at 3 RH points, 1 temperature point and 5 absolute pressure points.

260 0870
ClimaLog30 DAkkS certificate

DAkkS calibration including official certificate

Calibration points:
Rel.humidity : 20%, 50%, 80%rh
           at 20°C
Temperature : 20°C
Abs. pressure : 5 points
in range   750 …1200 mbar

USB power supply

Power supply with USB socket to power H*ygro*Guard 30 *Clima*Log 30 or *Data*Log 30. If powered by this unit, the internal AA batteries are only for backup and in case of a power failure.

1,8m USB cable already included in data logger package

Remark: internal alkaline batteries cannot be charged

260 0872
USB power supply

Dimensions: 55x25x80 mm

Weight: 50 g

Input power : 100…260V AC
             50/60 Hz
Output power : +5V DC USB
              1200mA / 6W

Housing/protection: plastic ABS / IP40

Options to *Data*Log 30

for *Data*Log 30 monitoring systems

*Stat*Maxx S *(for wall mounting)*

The ***Stat*Maxx S** is a universal measurement instrument for air humidity and temperature measurement in rooms. The instrument has an UMB interface (4 units up to 150m total bus cable length) and the possibility of a 2 point control/alarming with an internal relay *(isolated 30V switch for LOG-PU power supply)*

Delivery includes:
Mounting accessories and operating manual

260 0840 StatMaxx S

Dimensions: 110 x 118 x 50mm

Probe: diameter 13 x 58 mm

Weight: 220 g

Power supply: 24 VDC ± 20%

Outputs: UMB interface for 4
        StatMaxx and DataLog 30
        1 ON/Off switch
        30V / 2 A for alarm
        control with *set point*

Optional: factory calibration RH/T
        33, 75 % RH / 25°C

*Stat*Maxx R *(for duct mounting)*

The ***Stat*Maxx R** is a universal measurement instrument for air humidity and temperature measurement in ducts. The instrument has an UMB interface (4 units up to 150m total bus cable length) and the possibility of a 2 point control/alarming with an internal relay *(isolated 30V switch for LOG-PU power supply)*

Delivery includes:
Mounting accessories and operating manual

Remark: duct mounting kit not included (see accessories)

260 0839 StatMaxx R

Dimensions: 110 x 118 x 50mm

Probe: diameter 13 x 250 mm

Weight: 240 g

Power supply: 24 VDC ± 20%

Outputs: UMB interface for 4
        StatMaxx and DataLog 30
        1 ON/Off switch
        30V / 2 A for alarm
        control with *set point*

Optional: factory calibration RH/T
        33, 75 % RH / 25°C

*Stat*Maxx M *(for external sensor mounting)*

The ***Stat*Maxx M** is a universal measurement instrument for air humidity and temperature with remote sensor with 3m cable. The instrument has an UMB interface (4 units up to 150m total bus cable length) and the possibility of a 2 point control/alarming with an internal relay *(isolated 30V switch for LOG-PU power supply)*

Delivery includes:
Mounting accessories and operating manual
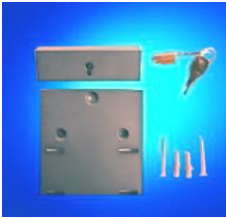
Remark: duct mounting kit not included !

260 0841 StatMaxx M

Dimensions: 110 x 118 x 50mm
Probe: diameter 13 x 250 mm with
        3 m cable

Weight: 240 g

Power supply: 24 VDC ± 20%

Outputs: UMB interface for 4
        StatMaxx and DataLog 30
        1 ON/Off switch 30V / 2 A for alarm
        control with *set point*

Optional: factory calibration RH/T
        33, 75 % RH / 25°C

Theft protection kit *(with lock)*
for HygroGuard 30, ClimaLog 30, DataLog 30

For all loggers. Can also be used as robust and safe wall mounting kit.

Kit made of massive metal and can be secured with padlock.

Dimension:	130 x 120 x 5mm
Weight:	approx. 350 g
Accessories:	- screws/dowels
	- fixation plates
	- Padlock with key

260 1230 Theft protection

Duct mounting kit
Duct mounting flange for **Stat Maxx R**. For easy and tight mounting to ducts or through walls/ceilings incl. sealing O-ring.Installation with 3 screws.The 13mm tight flange hole resists an overpressure of 3 bars. Sensor can be removed at any time for adjustment.

-> Diameter fixation range: diam. 10 ...14 mm

Dimensions	: 60 x 20 mm
Weight	: 30 g
Installation range: diam. 9…14mm	

111 5343
Duct mounting kit

LOG-PU power unit
Power supply for *Data*Log 30/StatMaxx/nSens-HT.

Typical applications: storages monitoring, archives, museums etc.
- galvanic separated power supply
- connection for 1 DataLog + 4 StatMaxx

Dimensions:	225x110x60mm
Weight:	500 g
Input power :	115-230V AC /16W
	50/60 Hz
Output power :	24V DC / 12W

260 0869 LOG-PU

UMB-bus connector
Connector for UMB-bus cable connection between a *Data*Log 30 unit and UMB sensors (e.g. *Stat*Maxx).

Note:
The *Data*Log 30 device has also an additional analogue input that can be used parallel to the UMB connection.

Dimensions: 20 x 60 mm

Weight: 30 g

Connection: 5 pol with screw
for UMB bus and
Power of the StatMaxx

Ready for UMB bus cable (2x2 wire for power and signal) . UMB-bus length max. 150 m

260 0873 UMB connector
for *Data*Log 30

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nSens-HT-ENS and nSens-T-NBS probe
Digital **nSens-HT humidity & temperature** probe with resistive-electrolytic humidity- and NTC temp. sensor. With nCap-PS protection filter cap.

Digital **nSens-T temperature** probe with high quality NTC temperature sensing element and nCap-E protection cap.

The calibration points are saved directly on the probe. The verification and calibration is done by the separately available nSoft-CAL calibration software. The plug-in probe can be replaced very easily.

Probes delivered in a separate package.

Dimensions:	L101mm x ∅ 13mm
	Detailed information
	can be found in the
	technical data sheet.
Communication:	digital by Bus-system
Fact. calibration:	at 2 temperature
(nSens-T)	points incl. certificate
Fact. calibration:	at 5 humidity
(nSens-HT)	points incl. certificate
Verification &	
Calibration:	with nSoft-CAL software

260 1171   nSens-HT-ENS
260 1172   nSens-T-NBS

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nLink-UMB adapter for nSens-HT/nSens-T
Conversion adapter from nSens probe to DataLog 30.
Up to 4 nSens probes with 1 nLink-UMB each can be connected to a DataLog 30 device.

Remark:
Each nSens requires 1 nLink-UMB to be connected

Dimension	: 20 x 60 mm
Weight	: approx.. 30 g
Connector	: 5 pole screwed
	for UMB-Bus side and
	3 pole for nSens-HT side

260 1063 nLink-UMB
for *Data*Log 30

Bus cable

Sensor-/actuator-cable, 4-pole, PUR, grey-black RAL 7021, straight connector M12, A-coded, on straight connector M12, A-coded

Cable length: 10m respectively 2m.

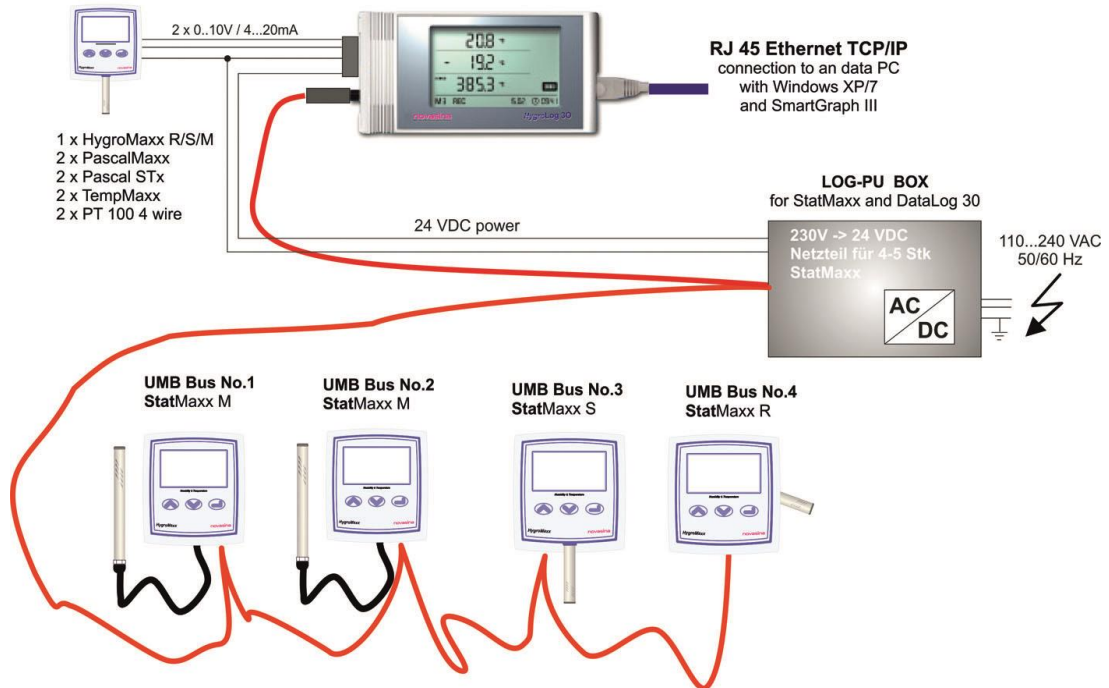|	
Cable lengths:	2m resp.10m
Weight:	approx. 570 g (10m) approx. 120 g (2m)
Connector:	M12 / 4 pole A-Standard
UMB-Bus length:	max. 150 m

260 1198 Length 10m
260 1276 Length 2m

Y-junction

5-pole, connector straight M12 screw connections, A-coded, on straight connector M12, A-coded and straight connector M12, A-coded, parallel junction

Dimensions:	50,1 x 35,6 mm
Weight:	approx. 25 g
Connectors:	M12, A-coded

260 1281 Y-junction

T-junction

5-pole, connector straight M12 screw connections, A-coded, on straight connector M12, A-coded and straight connector M12, A-coded, parallel junction
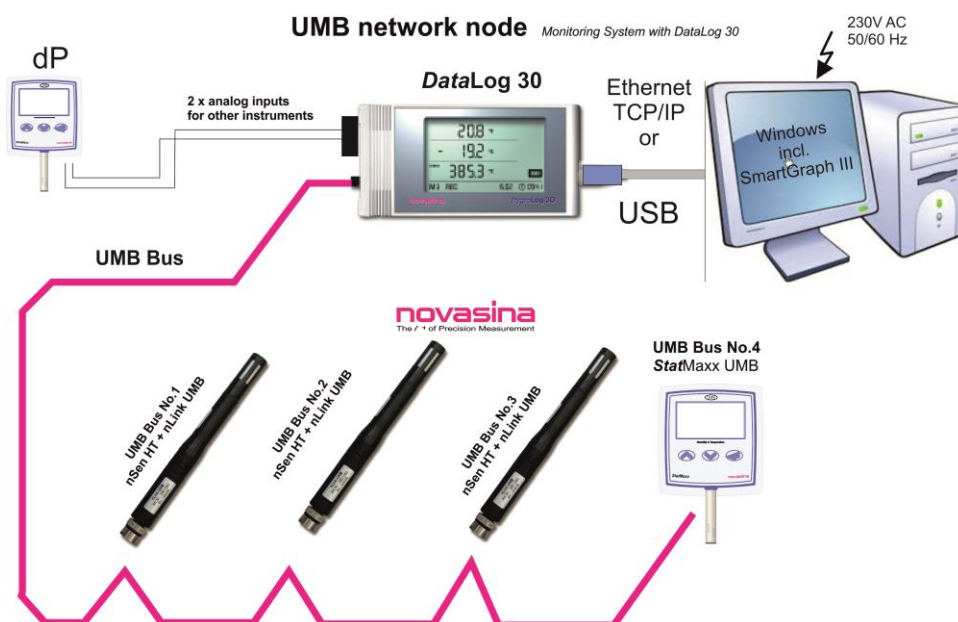
Dimensions:	55,8 x 32,5 mm
Weight:	approx. 20 g
Connectors:	M12, A-coded

260 1282 T-junction

Installation example 1
(StatMaxx / PascalMaxx)

2 x 0..10V / 4...20mA

20.8
19.2
385.3

RJ 45 Ethernet TCP/IP
connection to an data PC
with Windows XP/7
and SmartGraph III

1 x HygroMaxx R/S/M
2 x PascalMaxx
2 x Pascal STx
2 x TempMaxx
2 x PT 100 4 wire

LOG-PU BOX
for StatMaxx and DataLog 30

24 VDC power

230V -> 24 VDC
Netzteil für 4-5 Stk
StatMaxx

110...240 VAC
50/60 Hz

AC / DC

UMB Bus No.1
StatMaxx M

UMB Bus No.2
StatMaxx M

UMB Bus No.3
StatMaxx S

UMB Bus No.4
StatMaxx R

Installation example 2
(nSens-HT with nLink-UMB)

dP

UMB network node *Monitoring System with DataLog 30*

230V AC
50/60 Hz

2 x analog inputs
for other instruments

*Data*Log 30

20.8
19.2
385.3

Ethernet
TCP/IP
or

USB

Windows
incl.
SmartGraph III

UMB Bus

novasina
The / + of Precision Measurement

UMB Bus No.1
nSen HT + nLink UMB

UMB Bus No 2
nSen HT + nLink UMB

UMB Bus No.3
nSen HT + nLink UMB

UMB Bus No.4
StatMaxx UMB

*Hygro*Maxx *R/S/M*

High performance measuring instrument with large **LCD**isplay for air relative humidity and temperature. For installations in rooms or ducts. The digital capacitive humidity measurement cell in conjunction with a newly developed sensor technology, enable this device to be used in various applications for measuring climatic parameters. Operation is effected via 3 keys and an intuitive menu. The **Hygro**Maxx transmits 2 analogue outputs for relative humidity and temperature. These can be scaled as required. Optimal integration into a control system can therefore be achieved. The **Hygro**Maxx is available in different versions for room and duct measurement.

Technical specifications at a glance:

Working range RH	:	0....100% RH
Working range T	:	-20...80°C *(sensor)* 0...50°C *(transmitter)*
Meas. accuracy	:	RH: +/- 3.0% RH at 5...95% RH and 0...50°C
		+/- 1.5% RH at 10...90% RH and 15...30°C
		(with 3 point calibration with SAL-SC hum.standards)
		T: +/- 0.5°K at 0....50°C / +/- 0.8°K at -20...80°C
Signal output	:	2x analogue outputs U/I (selectable)
		U : 0....10V : 2...10V / I : 0...20mA : 4...20mA
		freely scalable output-characteristic curve operated by integrated configuration menu
Display	:	2 line display RH and Temp. contemporaneously, error/menu control display, dimensions 60x30 mm
Functions	:	units °C / °F, adjustment at 3 humidity points and 1 temperature point, scalable analogue outputs, moving average display ¼, 1, 3 hours, keylock by password
Adjustment	:	checkable and adjustable at any time at 3 RH points using the proven Novasina humidity standards SAL-SC
Measurement principle	:	RH: digital capacitive CMOS-Sens[®] technology
		Temp.: digital PN barrier layer

*Hygro*Maxx

Humidity/temperature transmitter for HVAC and process controls with local LCDisplay.

The **Hygro**Maxx product series have been developed following the newest technology in monitoring and controlling in the HVAC sector. These products represent an ideal combination of performance and price. The new sensor technology, the configuration possibilities and the robust design set a new standard in the HVAC field.

Thanks to the new design conception, these instruments are easy for installation and maintenance. Integrated menu functions facilitate the start-up, service resp. the RH adjustment with the Novasina SAL-SC humidity standards. Furthermore this product can be easily customised and adapted to specific needs (OEM versions).

Applications:
- **HVAC process-control and -monitoring**
- **Paper and textile manufacturing and handling**
- **Controls and monitoring systems in labs and metrology rooms**
- **Monitoring of industrial combustion processes**
- **Storage and archive monitoring in museums and libraries**
- **Storage systems, cooling rooms in the food & pharma industry**

Measurement instrument *Hygro*Maxx:

Dimension : 110 x 118 x 50mm
Power supply : 24 V DC ± 20%

Probe length S-type: diam.13 x 58 mm
Probe length R-type: diam.13 x 250 mm

Humidity measurement:

CMOS-Sens[®] technology, digital capacitive
Measurement range : 0...100 % RH
Reproducibility : ± 1.0 % RH
Max.accuracy (standard) : ± 3.0 % RH
Max.accuracy (calibrated) : ± 1.5 % RH

Temperature measurement:
digital PN barrier silicon layer
Measurement range : -20....80°C
Reproducibility : +/- 0.1°K
Accuracy : +/- 0.5°K (0...50°C)
Accuracy : +/- 0.8°K (-20...80°C)

Sensor Checks SAL-SC:
Humidity standards based on saturated salt solutions in plastic cylindrical containers. For multiple use, with „Cellgard" humidity permeable membrane.

For values: 11%, 33%, 53%, 75%, 90% RH

HVAC and industry transmitter system

HygroMaxx S / R / M

HygroMaxx S *(for wall mounting)*
Humidity/Temperature measurement instruments for rooms

HVAC transmitter with stylish designed, robust, two-part plastic housing. Ideal for room measurements, monitoring and controlling of climatic parameters. 24 VDC power supply (no galvanic separation), 2 analogue outputs (U or I) for temperature and relative air humidity. The cable entry easily made via the housing's underside. The device is fixed with 4 screws to the wall. The big LCDisplay allows a good readability, even from the distance. Various menu functions and adjustment of RH and T as well as the analogue outputs and a password protection complete this versatile instrument.

252 3054 HygroMaxx S

Dimension: 110 x 118 x 50mm
Probe: diameter 13 x 58 mm
Weight: 220 g
Power supply: 24 VDC ± 20%
Outputs: 2 x analogue U/I
          0...10V   / 2...10V
          0...20mA / 4..20mA
Meas.range: 0...100% /-20...+80°C
          (only sensor)
Units: RH / °C or °F
Including mounting accessories and operating manual
Optional: factory calibration RH/T

HygroMaxx R *(for duct mounting)*
Humidity/Temperature measurement instruments for ducts

HVAC transmitter with aesthetic design, robust, two-part plastic housing. Ideal for duct measurements, monitoring and controlling of climatic parameters. 24 VDC power supply (no galvanic separation), 2 analogue outputs (U or I) for temperature and relative air humidity. The cable entry is easily made via the housing's underside. The device is fixed directly or with a mounting flange to the air duct. The big LCDisplay allows a good readability, even from the distance. Various menu functions as adjustment of RH and T as well as the analogue outputs and a password protection complete this versatile instrument.

252 3129 HygroMaxx R

Dimension: 110 x 118 x 50mm
Probe: diameter 13 x 250 mm
Weight: 280 g
Power supply: 24 VDC ± 20%
Outputs: 2 x analogue U/I
          0...10V   / 2...10V
          0...20mA / 4..20mA
Meas.range: 0...100% /-20...+80°C
          (only sensor)
Units: RH / °C or °F
Including mounting accessories and operating manual
Optional: factory calibration RH/T
Accessories: duct mounting flange (not included in scope of delivery)

HygroMaxx M *(for external sensor mounting)*

HVAC transmitter with aesthetic design, robust, two-part plastic housing. The included remote sensor probe **Sens**Maxx 13 with 3m cable makes this instrument ideal for monitoring and controlling of processes, where a high flexibility is required. 24 VDC power supply (no galvanic separation), 2 analogue outputs (U or I) for temperature and relative air humidity. The cable entry is easily made via the housing's underside. The device is fixed with 4 screws to the wall. The big LCDisplay allows a good readability, even from the distance. Various menu functions as adjustment of RH and T as well as the analogue outputs and a password protection complete this versatile instrument.

252 3130 HygroMaxx M

Including SensMaxx 13 remote sensor

Dimension: 110 x 118 x 50mm
Probe: diameter 13 x 250 mm
Weight: 200 g
Power supply: 24 VDC ± 20%
Outputs: 2 x analogue U/I
          0...10V   / 2...10V
          0...20mA / 4..20mA
Meas.range: 0…100% /-20…+80°C
          (only sensor)
Units: RH / °C or °F
Including mounting accessories and operating manual
Optional: factory calibration RH/T
Accessories: duct & wall mounting flange
(not included in scope of delivery)

*Stat*Maxx R/S/M

The Novasina *Stat*Maxx is a state-of-the-art **hygro/thermostat** for effective control applications for relative air humidity and air temperature. The configuration is made by 3 front buttons and an intuitive menu structure directly on the device. The alarm and control function drive an integrated relay switch for turn on/off an heater or humidifier. If you need data monitoring, there is an integrated bus interface (UMB - Universal Measurement Bus) implemented. This characteristics make the StatMaxx very versatile for climatic controls, monitoring and/or management of humidifiers and temperature controllers. This transmitter series offer 2 different models for wall (S type) or duct (R type) mounting.

Technical specifications at a glance:

Working range RH	: 0....100% RH
Working range T	: -20...80°C *(sensor)* 0...50°C *(transmitter)*
Meas. accuracy	: Rel. humidity: +/− 3.0% RH at 5...95% RH and 0...50°C
	+/- 1.5% RH at 10...90% RH and 15...30°C
	(with 3 point calibration with SAL-SC hum.standards)
	Temperature: +/- 0.5°K at 0....50°C / +/- 0.8°K at -20...80°C
Signal output	: - 1 digital output by relay NO/NC max. 260VAC/2A
	- 1 UMB Bus interface *(Universal Measurement Bus)*
Display	: 2 line display RH and T,menu display, error messages. Dimension 60x30 mm
Functions	: units °C / °F, adjustment at 3 humidity points and 1 temperature point, alarm level setting incl. delay and hysteresis, UMB-bus configuration, moving average display ¼, 1, 3 hours, key lock by password
Adjustment	: with Novasina SAL-SC standards at 3 RH points with referential instrument at 1 Temp. point
Measurement principle	: Rel. humidity: digital capacitive CMOS-Sens® technology Temperature: digital PN barrier layer

*Stat*Maxx

Humidity/temperature hygrostat with LC-Display for HVAC and simple process controls.

The *Stat*Maxx hygrostats have the latest state-of-the-art technology on board and can be used for 2-point controlling systems for humidity and temperature regulation. The used sensor technologies, the easy configuration possibilities and the robust design make this device ideal for applications in HVAC processes.

Thanks to its design the *Stat*Maxx can be easily mounted and put into operation. Another plus is the maintenance and calibration that can be performed on site with the Novasina multiple use SAL-SC humidity standards. Last but not least the small dimensions and the big display assure an ideal positioning and a good readability of the actual values and messages displayed on the LCD. Of course and as habitually this instrument can be also customised and adapted to specific customer needs (OEM versions).

Measurement instrument *Stat*Maxx:

Dimension	: 110 x 118 x 50mm
Power supply	: 24 V DC ± 20%

Probe length S-type: diam.13 x 58 mm
Probe length R-type: diam.13 x 250 mm

Humidity measurement:

CMOS-Sens® technology, digital capacitive

Measurement range	: 0...100 % RH
Reproducibility	: ± 1.0 % RH
Max.accuracy (standard)	: ± 3.0 % RH
Max.accuracy (calibrated)	: ± 1.5 % RH

Temperature measurement:
digital PN barrier silicon layer

Measurement range	: -20....80°C
Reproducibility	: +/- 0.1°K
Accuracy	: +/- 0.5°K (0...50°C)
Accuracy	: +/- 0.8°K (-20...80°C)

Sensor Checks SAL-SC:
Humidity standards based on saturated salt solutions in plastic cylindrical containers. For multiple use, with „Cellgard" humidity permeable membrane.

For values: 11%, 33%, 53%, 75%, 90% RH

Applications:
- **HVAC process-control and -monitoring (2-point controls)**
- **Paper and textile manufacturing and handling**
- **Control of humidifiers and heating coils**
- **Storages in various industries such as food & pharmaceutical**
- **Storages, archives in museums, libraries**
- **OEM solutions in combination with humidifiers/dehumidifiers**

StatMaxx S / R / M
HVAC and industry transmitter system

StatMaxx S *(for wall mounting)*

Hygrostat with robust, plastic housing and robust design for wall mounting with integrated sensor shaft. Ideal for use in rooms. Power cable can be easily inserted via the housing underside. The device is fixed with 4 screws.

UMB bus tot. length: max. 150m (4 units +Datalog)

Main menu functions are: calibration; alarm, delay and hysteresis settings; configuration of the UMB (Universal Measurement Bus).

<u>Delivery includes:</u>
Mounting accessories and operating manual

260 0840 StatMaxx S

Dimension: 110 x 118 x 50mm
Probe: diameter 13 x 58 mm

Weight: 220 g

Power supply: 24 VDC ± 20%

Outputs: 1 digital output by relay NO/NC max. 30VACDC/2A
UMB-bus interface

Meas.range: 0...100% /-20...+80°C
        (only sensor)

Units: RH / °C or °F

Optional: factory calibration RH/T
        33, 75 % RH / 25°C

StatMaxx R *(for duct mounting)*

Hygrostat with robust, two-part plastic housing and robust design for wall mounting with integrated sensor shaft. Ideal for use in air ducts (back side). Power cable can be easily inserted via the housing underside. The device is fixed with 4 screws.
UMB bus tot. length: max. 150m (4 units + Datalog)

Main menu functions are: calibration; alarm, delay and hysteresis settings; configuration of the UMB (Universal Measurement Bus).
<u>Delivery includes:</u>
Mounting accessories and operating manual
Duct mounting kit not included (see accessories)

260 0839 StatMaxx R

Dimension: 110 x 118 x 50mm
Probe: diameter 13 x 250 mm
Weight: 220 g

Power supply: 24 VDC ± 20%
Outputs:
1 digital output by relay NO/NC max. 30VACDC/2A UMB-bus interface
Meas.range: 0...100% /-20...+80°C
        (only sensor)

Units: RH / °C or °F

Optional: factory calibration RH/T
        33, 75 % RH / 25°C

StatMaxx M *(for external sensor mounting)*

Hygrostat with robust, two-part plastic housing and robust design for wall mounting with integrated sensor shaft. Ideal for use in air ducts or rooms Power cable can be easily inserted via the housing underside. The device is fixed with 4 screws.

UMB bus tot. length: max. 150m (4 units + Datalog)

Main menu functions are: calibration; alarm, delay and hysteresis settings; configuration of the UMB (Universal Measurement Bus).

<u>Delivery includes:</u>
Mounting accessories and operating manual
Duct mounting kit not included (see accessories)

260 0841 StatMaxx M

Dimensions: 110 x 118 x 50mm
Probe: diameter 13 x 250mm with
        3m cable

Weight: 240 g

Power supply: 24 VDC ± 20%

Outputs:
1 digital output by relay NO/NC max. 30VACDC/2A   UMB-bus interface

Meas.range: 0...100% /-20...+80°C
        (only sensor)

Units: RH / °C or °F

Optional: factory calibration RH/T
        33, 75 % RH / 25°C

STAT-PU power unit

Power supply unit and switch for 2 point control in combination with 1 unit StatMaxx for switching ON / OFF high power devices (up to 11 kW) like heaters, coolers, humidifiers, dehumidifiers. With integrated 3-phase relay for 115…600V, 11kW, galvanic isolated. Also integrated is a 24V power supply for the StatMaxx and a power switch.

260 0877 STAT-PU

Dimensions: 225x110x90mm
Weight: 700 g
Input power : 115-230V AC / 4W
        50/60 Hz
Output power : 24V DC / 2,5W
<u>Relay</u>
3 phase galv.isolated switch NO max. 11 kW. 1 auxilary contact isolated NO <= 17VDC/5mA   / 115…600V / 16A

LOG-PU power unit

Power supply for *Data*Log 30/StatMaxx/nSens-HT.

Typical applications: storages monitoring, archives, museums etc.

- galvanic separated power supply
- connection for 1 DataLog + 4 StatMaxx

260 0869 LOG-PU

Dimensions: 225x110x60mm
Weight: 500 g
Input power : 115-230V AC /16W
        50/60 Hz
Output power : 24V DC / 12W

Accessories
HygroMaxx & StatMaxx

Duct mounting kit

Duct mounting flange for easy and tight mounting to ducts or through walls/ceilings incl. sealing O-ring.Installation with 3 screws.The 13mm tight flange hole resists an overpressure of 3 bars. Sensor can be removed at any time for adjustment.

-> Diameter fixation range: diam. 10 ...14 mm

111 5343 Duct mounting kit

Dimension	: 60 x 20 mm
Weight	: 30 g
Installation range	: diam. 9...14 mm

Wall mounting kit 13 mm
(for HygroMaxx M type external sensor)

Wall mounting clips (2 pcs) for the fixation of the **Sens**Maxx **13** probes to walls with M4 wood, plastic or metal screws. Clips can be used several times.

252 4468 Wall mounting Clip

Material	: polycarbonate
Quantity	: 2 pcs
Weight	: 15 g

Humidity generators SAL-SC
(with factory calibration certificate)

Reusable humidity standards based on saturated salt solutions in plastic cylinders with moisture permeable membranes. Each salt is delivered in a well-sealed box. Sensor Checks SC are obtainable for the following values (at 25°C) :

6.4 % rh
11.3 % rh   75.3 % rh
32.8 % rh   84.3 % rh
52.9 % rh   90.1 % rh
57.6 % rh   97.3 % rh

Please consult the operation manual of your instrument to see which points can be calibrated. Other SAL-SC can be used for verification.

260 0978 -> SAL-SC 6
111 0885 -> SAL-SC 11
111 0855 -> SAL-SC 33
111 0857 -> SAL-SC 53
260 0219 -> SAL-SC 58
111 0859 -> SAL-SC 75
251 8965 -> SAL-SC 84
111 0896 -> SAL-SC 90
251 8966 -> SAL-SC 97

Humidity values in the temperature range 15°.... 30°C:

6.9 ..... 6.2% rh / 15....30°C
11.3 ..... 11.3% rh / 15....30°C
33.3 ..... 32.4% rh / 15....30°C
55.9 ..... 51.4% rh / 15....30°C
60.7 ..... 56.0% rh / 15....30°C
75.6 ..... 75.1% rh / 15....30°C
85.9 ..... 83.6% rh / 15....30°C
90.9 ..... 89.9% rh / 15....30°C
97.9 ..... 97.0% rh / 15....30°C

The precision corresponds to the Greenspan Report 1977 typically +/- 0.3 % rh

Weight :   90 g

Humidity generators SAL-SC
(with accreditation and included certficate)

Reusable humidity standards based on saturated salt solutions in plastic cylinders with moisture permeable membranes. Each salt is delivered in a well-sealed box. Sensor Checks SAL-SC are obtainable for the following values (at 25°C) :
11.3 % rh
32.8 % rh
52.9 % rh
75.3 % rh
90.1 % rh
97.3 % rh

111 1044 -> SAL-SC 11 C
111 1037 -> SAL-SC 33 C
111 1040 -> SAL-SC 53 C
111 1035 -> SAL-SC 75 C
111 1032 -> SAL-SC 90 C
260 1275 -> SAL-SC 97 C

Internationally accredited laboratory

All Novasina humidity standards can also be supplied with an internationally recognised certificate from an accredited European laboratory (UKAS England).

Weight :   90 g

Set with 5 humidity generators SAL-SC

Reusable humidity standards SAL-SC in a case delivered incl. the needed adapters for Novasina probes and factory calibration certificates.
Case set contains:
- SAL-SC 11
- SAL-SC 33
- SAL-SC 53
- SAL-SC 75
- SAL-SC 90
- Factory calibration certificates of SAL-SC
- 2 adapters for Novasina probes

111 7847 Check set *(standard)*
111 7841 Case without content

Humidity values in the temperature range 15°... 30°C :

11.3 ..... 11.3% rh / 15....30°C
33.3 ..... 32.4% rh / 15....30°C
55.9 ..... 51.4% rh / 15....30°C
75.6 ..... 75.1% rF / 15....30°C
90.9 ..... 89.9% rF / 15....30°C

The precision corresponds to the Greenspan Report 1977 typically +/- 0.3 % rh

Weight :   700 g
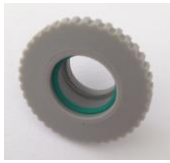
Adapter SAL-SC
for sensors with diameter 13 mm

This adapter is needed for calibration of a system with sensor diameter 13 mm. It ensures an airtight fixation of a SAL-SC check to the sensor top (measurement cell area). It reduces the diameter of 20 mm to 13 mm and ensures an airtight seal.

-> The adapter should be first mounted on the sensor top and then putted the SAL-SC check on it. Both seals should be carefully checked, leaks will bias the calibration.

Dimension **:**	Out diam.30/In.diam 13 mm
Weight :	5 g
Material :	Thermoplastic resin

260 1143 Adapter SAL-SC

Thermal insulation styrofoam box
For the SAL-SC sensor checks

A styrofoam box providing optimal insulation and temperature stabilisation of a SAL-SC check during the calibration procedure. Consisting of two half-covers for simple temporary mounting.
-> Can be used together with the SAL-SC calibration kit

Dimensions :	100 x 65 x 50 mm
Weight :	10 g
Material :	thermal insulating styrofoam PPE

111 1302 Styrofoam box

Spare parts

Spare plug set - *Hygro*Maxx

Spare plug set for main board, for power supply and analogue outputs.

Attention: use only 24 VDC +/- 10% power supply !

Plug :	2 pole 3.84 mm for power supply 3 pole 3.84 mm for analogue outputs
Weight :	total 20 g
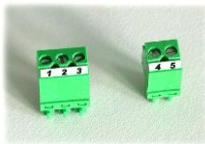
252 3134 Spare part plug set

Spare plug set - StatMaxx

Spare plug set for main board, for power, UMB and Relay output

Plug :	- 3 pole 3.84 mm for power supply & digital output - 6 pole 3.84 mm for UMB bus - 4pole for switch 230V
Weight :	total 15 g
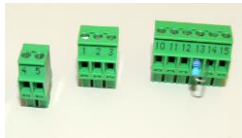
260 0884 Spare part plug set

Spare room sensor

Spare sensor for **S-type** transmitters. The sensor (length 75 mm) can be replaced by un-tighten the 2 screws in the cover and unplugging the RJ 11 connector.

Recommendation: switch off the power supply before you replace **the sensor**

Dimension :	Ø 13 x 75 mm
Cable :	150mm with RJ 11
Weight :	15 g
Housing :	plastic armature without filter

252 3131 room sensor for S-type transmitters

Spare duct sensor

Spare sensor (length 250mm) for **R-type** transmitters. Duct mounting flange not included.

Recommendation: switch off the power supply before you replace the sensor

Dimension :	Ø 12,7 x L 250 mm
Cable :	150mm with RJ 11
Weight :	80 g
Housing :	stainless steel with protection filter

252 3132 duct sensor

Remote sensor for *Hygro*Maxx M

Spare remote sensor with **3m cable**. Duct mounting flange not included.

Recommendation: switch off the power supply before you replace the sensor

Dimension :	Ø 12,7 x L 250 mm
Cable :	3m with free wire endings !
Weight :	150 g
Housing :	stainless steel with protection filter

252 3133 remote sensor

Remote sensor for StatMaxx M

Spare remote sensor with **3m cable**. Duct mounting flange not included.

Recommendation: switch off the power supply before you replace the sensor

Dimension	: Ø 12,7 x L 250 mm
Cable	: 3m with free wire endings !
Weight	: 150 g
Housing	: stainless steel with protection filter

260 0940 remote sensor

Housing bottom

As spare part for damaged housings.

Dimension	: 110 x118 x 35 mm
Weight	: 80 g
Material	: PVC

252 3135 housing bottom

Options

External power supply

External primary power supply, for voltage range 90 to 264 VAC with exchangeable plugs EU/US/JP.

From the secondary side this power supply can be connected directly to the transmitter.

Primary side :
Voltage range: 90 ... 264VAC
EU/US/JP
Secondary side :
Voltage: 24V DC +/- 5%

Cable ends unshielded and ready for connection.
Weight: 90 gr

252 4210 power supply EU/US/JP

Factory calibration
Including Novasina factory calibration certificate

Factory calibration and certificate for 3 humidity points (11%, 53%, 75% RH) & 1 temperature point (+25°C).
-> Enables a higher measurement accuracy

Factory calibration certificate :

The shipping of new instruments is always including factory calibration certificate, provided that the calibration has been ordered with PN 2524212.

252 4212

UKAS certification
in an accredited European laboratory

UKAS certification at min. two humidity points and if required at one or more temperature points.

For M versions, the remote sensor has to be sent together with the corresponding transmitter.

International certified laboratory

Novasina offers the possibility to buy UKAS certified measuring instruments.

Weather protection shield

For outdoor applications such as meteorological stations or similar.

Including all mounting accessories and fixation of probes with diameter 13…20 mm.

Can be fixed to poles with diameter 25…50 mm.

Dimension:	270x220x∅130mm
Material:	UV stabilised, thermoplastic slats, painted steel construction
Weight:	650 g

111 6812 Weather protection shield

TempMaxx

The TempMaxx is a precision measurement instrument with integrated control functions for the detection of temperature with external resistor sensors. The large displays, intuitive menu structure as well as the possibility to connect various sensors make this device extremely versatile for almost all industrial applications. The external sensors can not only detect very accurately the temperature in air, but also in liquids, solid objects and surfaces. A digital electronics design allows using the TempMaxx transducer in manifold applications such as monitoring, control and alarming.

This new instrument provides a scalable analogue output (U & I) as well as a relay switch output for 2 point control functions. The large LCDisplay indicates temperatures up to +400°C and °F. All versions of **PT 100** / 1'000, **Ni 1'000** or **NTC elements** can be wired in 2-, 3- or 4-wire technology. Using the integrated adjustment function, the TempMaxx transducer can be adapted ideally to each external sensor.

Technical specifications at a glance:

Temperature	:	0...50°C *(operational temperature transducer)*
		-50...400°C *(meas. range PT 100/1'000 sensor)*
		-50...200°C *(meas. range Ni 1'000 sensor)*
		-20...80°C *(meas. range NTC Beta Therm sensor)*
Accuracy	:	+/- 0.15% Full scale *(transducer accuracy)*
		depending on resistor element
		(see PT DIN classifications)
Signal output	:	1 analogue output U & I (usable in parallel)
		U: 0....10V ; 2...10V / I: 0...20mA ; 4...20mA
		free scalable output curve by configuration menu
		1 digital output by relay NO/NC max. 260VAC/2A
Display	:	2-line display for temperature °C or °F and
		Status/Error/Menu display, dimensions 60x30 mm
Functions	:	Selectable units: °C / °F,
		Scalable analogue outputs
		Setting of hysteresis and delay for alarm- or 2-point control purposes
		Password protection system
Adjustment	:	2-point temperature adjustment for each sensor type
Measurement principle	:	Platinum-, Nickel-resistor elements, NTC thermistors

*Temp*Maxx

Temperature transducer for HVAC and process controls with LCDiplay.

The *Temp*Maxx product line has been developed following the most recent know-how in the HVAC control field. This line brings an ideal symbiosis of performance and price. The robust and ergonomic design of the whole ...Maxx product line has been developed especially for industrial applications.

Thanks to its clever design the instrument can be installed very easily and also the maintenance can be done efficiently. The integrated menu functions ease the start-up and the calibration procedure. The complete product line can also be customised if required.

Applications:
- **HVAC process-control and -monitoring**
- **Paper and textile manufacturing and handling**
- **Controls and monitoring systems in labs and metrology rooms**
- **Monitoring of industrial combustion processes**
- **Storage and archive monitoring in museums and libraries**
- **Storage systems, cooling rooms etc. in food & pharmaceutical industry**

Transducer *Temp*Maxx:

Dimension	: 110 x 118 x 50mm
Power supply	: 24 V DC ± 20%

Outputs:

Analogue OUT	: 1 x U and I
	0 or 2...10V DC
	0 or 4...20 mA DC
Digital OUT	: 1 relay switch
	NO, NC
	max. 260 VAC / 2A
	(ohmic load)

Temperature measurement:

Sensor connection	: 2-, 3- or 4-wire
Sensor types	: PT 100 DIN 60751
	PT 1'000 /Ni 1'000
	AA, A, B, 1/3B, C
	NTC type Beta Therm

_Temp_Maxx
HVAC and industry transducer system

_Temp_Maxx
Temperature transducer for resistor sensors

Temperature transducer with robust industrial design. 2-part plastic housing with catcher (no screws for lid needed). The transducer is delivered **without** resistor sensors, which should be procured separately. Suitable for connection are all PT 100/1'000, Ni 1'000 and NTC resistor elements in various designs with 2-, 3- or 4-wire connection.

Optimal for climatic measurements or for monitoring and controls. Power supply 24VDC (no galvanic isolation), 1 analogue output (U and I in parallel) for temperature, freely scalable. Furthermore the transducer has 1 relay switch NO or NC with selectable threshold, hysteresis and delay on board.

The electrical cable insertion comes from the back side resp. bottom side. The instrument can be directly fixed to the wall using 4 screws. The large LCDisplay allows a reading from a big distances and several other menu functions such as sensor and output range selection, calibration and password protection complete this versatile transducer.

260 0284
Transducer
for resistor temperature measurement sensors

without sensor

Transducer TempMaxx :

Dimension : 110 x 118 x 50mm
Sensor : 13 x 75 mm
Weight : 220 g
Power supply : 24 VDC ± 20%
Output : 2 x analogue U/I
        0...10V / 2...10V
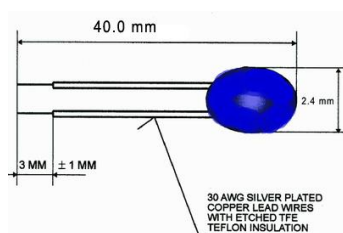   0...20mA / 4..20mA

Possible measurement ranges:
sensors
-50...400°C *(PT 100/1'000)*
-50...200°C *(Ni 1'000)*
-20...80°C   *(NTC Beta Therm)*

Transducer operational temp.:
0...50°C

Units : °C or °F
Optional : factory calibration T

Accessories

NTC Thermistor
-20 ... +80°C :

Cost efficient, accurate and very small NTC temperature sensor element for a direct 2-wire connection to the _Temp_Maxx.

Pearl diameter	: 2.4 mm
Material	: glass
Resistivity at 25°C	: 30 k Ohm 30K5A
Connection	: AWG 3 isolated

260 0633 **Beta Therm NTC**
Sensor element singular

NTC Beta Therm sensing element:

Pearl diameter	:	2.4 mm
Length	:	40.0 mm
Material	:	glass / CU
Quantity	:	1 pc
Weight	:	4 gr

PT 100 Cable duct sensor -50...+200°C

Universally applicable air cable duct sensor for extended temperature range up to +200°C.

Sensing element	: PT 100 1/3 DIN
Casing	: Immersion sleeve for gases & liquids, 6mm x 50mm sensor IP65
Connection	: 2-wire technology, bared ending

260 0634 **PT 100 Duct sensor**
1/3 DIN with 3m silicone cable

Duct Sensor PT 100 with cable:

Dimension	: 6 x 50 mm VA4
Cable length	3m silicone double isolated
Sensor	PT 100 1/3 DIN
Weight	: 140 gr
Connection	: 2-wire

PT 100 Air-cable sensor -35...+105°C

Fast responding air cable sensor for measurement of gases up to +105°C.

Sensing element	: PT 100 1/3 DIN
Casing	: Steel protection sleeve VA4 6mm x 50 mm with holes
Connection	: 4-wire technology, bared ending

260 0635 **PT 100 Air sensor**
1/3 DIN with 5m cable

Air sensor PT 100 with cable:

Dimension	: 6 x 50 mm VA4
Cable length	5m PVC double isolated
Sensor	PT 100 1/3 DIN
Weight	: 130 gr
Connection	: 4-wire

PT 100 Air-duct sensor -30...+180°C

Universally applicable gas duct sensor with duct probe length 150mm for temperature measurements in gaseous media in air ducts up to +180°C.

Sensing element : PT 100 1/3 DIN
Casing   : Stainless steel probe VA4
                    6mm x 150mm, IP 65 protection
                    PVC housing for connection
Connection   : 4-wire technology with
                    compression gland

260 0636 **PT100 Air-duct sensor**,1/3 DIN,4-wire

Air-duct sensor PT 100:

Dimension	: 6 x 150 mm VA4
Housing	: 60 x 80 x 39 mm
Material	: PVC M16 compression gland
Sensor	: PT 100 1/3 DIN
Weight	: 110 gr
Connection	: 4-wire

PT 1000 Air-room sensor -35...+70°C

Shapely air sensor for temperature measurements in rooms applicable up to +70°C, including white PVC housing.

Sensing element : PT 1'000
Housing   : PVC colour white, IP 20
                   only for applications in non
                   aggressive gases
Connection   : 2-wire technology, screwable

260 0637 **PT 1'000 Air-room sensor**, 2-wire

Air-room sensor PT 1'000 :

Dimension	: 87 x 85 x 30 mm
Material	: ASA with ventilation slots
Sensor	: PT 1'000 2-wire, 1.5 mm2
Weight	: 80 gr
Connection	: 2-wire

...Temperature sensors for TempMaxx

Other temperature sensors on request

Options

External power supply

External primary power supply, for voltage range 90 to 264 VAC with exchangeable plugs EU/US/JP.

From the secondary side this power supply can be connected directly to the transmitter

252 4210 power supply EU/US/JP

Technical data:
Primary side :
Voltage range: 90 ... 264VAC
EU/US/JP
Secondary side :
Voltage: 24V DC +/- 5%

Cable ends unshielded and ready for connection.
Weight: 90 gr

Spare parts
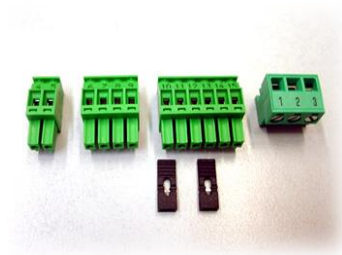
Spare connector set to *Temp*Maxx

Spare connector set for PCB to *Temp*Maxx for power supply, sensor input, analogue output and alarm (set with 4 pcs).

Incl. 2 jumpers for switching from 2-, 3-, or 4-wire technology wiring.

Packed inside plastic bag.

260 0303 Spare connector set

Spare connector set to TempMaxx:

Connectors: 2 pin 3.84 mm Power
4 pin 3.84 mm AOUT
6 pin 3.84 mm SENS
3 pin 5.08 mm ALA

Housing lower half for *Temp*Maxx

As spare part for damaged housings.

252 3135 Housing bottom

Spare housing bottom for TempMaxx :
Dimension : 110 x118 x 35 mm

Weight   : 80 g
Material   : PVC

CIC-Touch

This multi display for clean room air parameters such as air humidity, temperature, differential pressure and particles allows to check at a glance the actual climatic parameters in clean rooms. The online data are provided by external sensors and/or contact relays. Besides the actual measurement value, which is shown with the respective unit (e.g. temperature, humidity etc.) and measurement location, also the backlight colour changes according to the actual status. Green colour for values within the threshold and red colour if the threshold is exceeded.

The CIC-Touch display can be easily mounted in clean room walls without the need of any screws. The unit can be placed in a wall cavity, snapped in and fixed with clips, which are part of the display unit itself. Thanks to the consequent clean room suitable design, the installation depth is very low and hence the unit fits in all current clean room walls. The smooth front panel complies with the demands of clean room design, is therefore ideal to be cleaned and has no edges subject to be polluted by dust or any dirt.

Another highlight of the CIC-Touch is the connectivity such as analogue/digital interfaces, contact relays, ethernet, USB, Modbus, RS-232, RS-485 and a SD card. The CIC-Touch can be easily connected to any external sensor and also integrated in existing monitoring systems. The configuration is performed via the intuitive operation and configuration menu.

The CIC-Touch can also be factory configured for specific OEM applications.
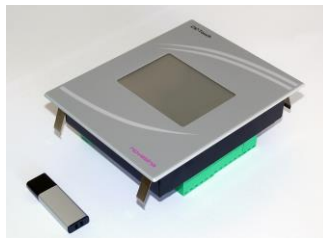
Applications:
- **Clean rooms**
- **Isolators**
- **Laminar flow benches**
- **Operating rooms**
- **Laboratories, calibration rooms**
- **Specific OEM solutions**

Industries:
- **Semiconductor**
- **Pharmaceutical**
- **Hospitals, OEM , etc.**

Your advantages:
- Semi-flush with the wall, no sharp edges, front panel only 2 mm thickness
- Easy to clean, flat and smooth surfaces
- Low installation depth and ideal for integration in all current clean room walls
- Snap-in mounting without any screws
- Display of up to 4 parameters at the same time
- Status display with status backlight colour
- Easy configuration by intuitive menu
- Several integrated communication interfaces

CIC-Touch touchscreen display

Recommended ambient sensors to be connected:

Air humidity and temperature:
- QuantaDat / nSens / nLink-Modbus
- HygroMaxx S/R/M
- TempMaxx

Differential pressure:
- Pascal-ST/ZB
- PascalMaxx

The CIC-Touch is an universal display and any sensor can be connected, it can also be used for installation in existing sensor networks.

260 0941 **CIC-Touch display**

Specifications:

Display:	graphical display 3,5" TFT display 70x52mm
Panel:	150 x 120 mm (H2O2 res.)
Mounting dimension:	H 127 x W 107 x D 50mm. incl. connectors
Power supply:	24 V AC/DC
Inputs:	4 x digital inputs 4 x analogue inputs
Outputs:	2 x relay contacts 230V
Digital interfaces:	ethernet Modbus (RS-485)
USB:	standard PC compatible

Product overview %RH / T instruments

Instrument	Parameter	Industry	Applications	Main features
QuantaDat/nSens	Rel. humidity Temperature and calcuated climatic parameters Output: Digital +4 AO Current/Voltage	• Pharmaceutical • Textile/Paper • Chemical • Medical • Health Care • Semiconductor • Power Plants • Building industry • Food • Agriculture	• Clean Rooms • Operating rooms • Combustion processes (gas turbines) • Drying processes • Meteorological stations • Demanding HVAC controls • Painting processes • Food process and storage • Green houses with high RH levels • Mining and tunnel building • Calibration labs • Specific OEM applications	• Multisensor technology • High accuracy • Highest repeatability • Low hysteresis • Linear response time • Intelligent probes • Climate parameter calculation • 4 scalable/adjustable analogue outputs • RS-485 interface • Sensor protection filter • Password protection
HygroMaxx S/R/M	Rel. humidity Temperature Output: +2 AO Current/Voltage	• Building Industry • Pharmaceutical • Agriculture • Medical • Food	• Generic HVAC installation • Packaging industry • Laboratories (food, pharma) • Storages • Archives, museums • Printing processes	• Good accuracy for HVAC applications • Big clear display • 2 scalable analogue outputs • Calibration at 3 points RH & 1 point T • Intuitive menu structure • Easy to start-up and mounting • 3 models for room, duct and remote use • Password protection
TempMaxx	Temperature PT 100 PT 1000 Ni 1000 NTC Output: 1 x relay 1 x AO Current/Voltage	• Building Industry • Pharmaceutical • Agriculture • Medical • Food	• Generic HVAC installation • Packaging industry • Laboratories (food, pharma) • Storages • Archives, museums • Printing processes	• High flexibility in connections of external probes 2-, 3-,4-wire (PT, Ni, NTC) • Big clear display • 1 scalable analogue output • 1 relay contact • Calibration at 2 points T • Intuitive menu structure • Easy to start-up and mounting • Password protection
StatMaxx S/R/M	Rel. humidity Temperature Output: 1xdigital Bus 1 x relay	• Building Industry • Pharmaceutical • Agriculture • Medical • Food	• Generic HVAC installation • Monitoring systems • Packaging industry • QA-laboratories • Laboratories (food, pharma) • Storages • Archives, museums • Printing processes	• Good accuracy for HVAC applications • Big clear display • 1 relay contact • UMB Bus interface • Calibration at 3 points RH & 1 point T • Intuitive menu structure • Easy to start-up and mounting • Password protection

Instrument	Parameter	Industry	Applications	Main features
*Clim*Mate (handheld device)	Rel. humidity Temperature Dew point Enthalpy Flow Atm. press. CO2 Air speed and more…	• Buildings • HVAC • Pharmaceutical • Food • Hospitals • Semiconductors • Logistics, storage • Archives	• HVAC installations • HVAC maintenance • QA laboratories • Storage climate control • Archives, museums • On site monitoring and data logging • Reports & documentation	• Battery powered >1 year • Colour touch-screen • Internal memory (2 million data points) • Data storage and visualisation software with included data cable • USB power supply as option • Multifunction sensor interface
HygroGuard 30	Rel. humidity Temperature Abs.hum. Battery status	• HVAC • Pharmaceutical • Building Industry • Food • Hospitals • Semiconductor • Logistics	• Generic HVAC installation • QA-laboratories • Container shipping • Storages • Archives, museums • On site monitoring and data logging • Reports & documentation	• Battery powered >1 year • Big clear LCDisplay • Internal memory (3'200'000 data points) • Data storage and visualisation software with included data cable • USB power supply as option • Calculation of dew point / absolute humidity
DataLog 30	Rel. humidity Temperature and more.. Battery status	• HVAC • Pharmaceutical • Building Industry • Food • Hospitals • Semiconductor • Logistics	• Generic HVAC installation • Monitoring systems • Packaging industry • QA-laboratories • Laboratories (food, pharma) • Storages • Archives • Museums • Printing processes	• Battery powered > 1 year life time • Big clear LCDisplay • Big internal memory (3'200'000 data points) • Data storage and visualisation software included with data cable • 2 analogue interfaces (voltage/current) • 8 UMB bus interfaces • USB power supply as option • Calculation of dew point / absolute humidity
ClimaLog 30	Rel. humidity Temperature Abs.hum. Abs. press. Battery status	• HVAC • Pharmaceutical • Building Industry • Food • Hospitals • Semiconductor • Logistics	• Generic HVAC installation • QA-laboratories • Container shipping • Storages • Archives • Museums • On site monitoring and data logging • Reports & documentation	• Battery powered > 1 year life time • Big clear LCDisplay • Big internal memory (3'200'000 data points) • Data storage and visualization software included with data cable • USB power supply as option • Calculation of dew point / absolute humidity
CIC-Touch	Universal touchscreen display for clean room wall installation	• Pharmaceutical • Semiconductor • Chemical • Medical • Health Care • Hospitals	• Clean rooms • Isolators • Laminar flow benches • Operating rooms • Laboratories, calibration rooms • Specific OEM solutions	• Semi-flush mounting • Easy to clean • Low installation depth • Snap-in mounting • Display of up to 4 parameters • Status display with status backlight colour • Easy configuration • Several integrated communication interfaces

Pascal-ST/ZB *"membrane"*

differential pressure measurement instruments

Thanks to an outstanding sensor technology, optimised measurement electronic, software and an **integrated automatic zero-point calibration**, these instruments excel with their accurate and stable readings.

Various functions for adjustment, password protection, measurement filters and intervals, scalable outputs as well as alarm settings emphasise the versatility of this instrument. Its application areas are consequently vast and it is ideal for demanding controls.

For the first time ever a membrane differential pressure instrument offers such outstanding performances at such competitive prices!

Main features:

Measurement ranges	:	-25...+25 Pa / -100 ...+100 Pa	*(bidirectional)*
Measurement accuracy at 20°C	:	25 Pa instruments +/- 0.3%	*(of the full scale)*
		100 Pa instruments +/- 0.1%	*(of the full scale)*
Hysteresis	:	+/- 0.15 Pa	*(over the full scale)*
Typical offset drift	:	+/- 0.15 Pa	*(automatic zero-point calibration)*
Configuration software	:	PascalTool-WIN *(Windows 8/NT/2000/XP/Vista/7/10)*	

Bi-directional measuring system Pascal-ST/ZB

The Pascal-*ST/ZB* differential pressure measuring devices are precision instruments for monitoring and controlling pressure differences of gaseous media in low ranges. The measurement principle is based on the static differential pressure detection with a silicon membrane.

Beside a high robustness and accuracy this devices offer an easy and intuitive handling and start up. The zero calibration is performed automatically and so the instrument is ready for use immediately after its installation.

All other configurations can be done using the user friendly **PascalTool WIN** software, which can be downloaded for free from the Novasina homepage and installed on a local Windows personal computers.

Technical data:

Dimensions:	68 x 119 x 29 mm
Weight:	ca. 160 g
Meas. ranges:	-25 ... +25 Pa
	-100 ... +100 Pa
Max. resolution:	0.1 Pa *(25-series)*
	0.1 Pa *(100-series)*
Meas. accuracy:	25 Pa: +/- 0.3%
	100 Pa: :+/- 0.1%
Temperature effect:	25 Pa: < 0.01 Pa /°C
	100 Pa: < 0.03 Pa /°C
Hysteresis:	+/- 0.15 Pa
Offset-Drift:	+/- 0.15 Pa
Max. overpressure:	+/- 20'000 Pa
Operating temp.:	5...45°C
Power supply:	10.5... 35 VDC
Protection:	IP 54 / EMC

Applications:
- **clean rooms, mini environments, clean room air locks**
- **laminar flow boxes**
- **air filter monitoring**
- **air velocity in ducts with pitot tubes**
- **leak detection systems**
- **isolators**
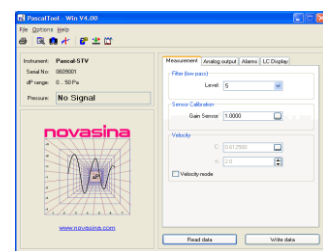
Configuration with PascalTool WIN:
can be performed with a Windows PC running Windows 95, 98, NT, 2000, XP, Vista, 7, 8, 10.

Pascal-ST/ZB

260 1241
Pascal-STV 25 ZB

Pascal-STV 25 ZB *(bidirectional)*

Measurement instrument for controlling differential pressures in low ranges of -25 to +25 Pa. The measurement principle is based on a piezo-resistive silicon membrane.

The continuously measured value goes on a scalable and adjustable analogue output (voltage or current).

- **Analogue** scalable **output** 0…10V / 4…20 mA
- Additional **LCD screen** on the instrument

Technical data:
- Meas. range: -25 ... +25 Pa
- Output: analogue output
  U : 0/2...10VDC (max.500 Ohm)
  I : 0/4...20mA (max.500 Ohm)
- Dot matrix LCD
- Power supply: 10.5 ... 35 VDC
- Power consumption
  max. 2.5 W
- Weight: 320 gr

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260 1242
Pascal-STV 100 ZB

Pascal-STV 100 ZB *(bidirectional)*

Measurement instrument for controlling differential pressures in low ranges of -100 to +100 Pa. The measurement principle is based on a piezo-resistive silicon membrane.

The continuously measured value goes on a scalable and adjustable analogue output (voltage or current).

- **Analogue** scalable **output** 0…10V / 4…20 mA
- Additional **LCD screen** on the instrument

Technical data:
- Meas. range: -100 ... +100 Pa
- Output: analogue output
  U : 0/2...10VDC (max.500 Ohm)
  I : 0/4...20mA (max.500 Ohm)
- Dot matrix LCD

- Power supply: 10.5 ... 35 VDC
- Power consumption
  max. 2.5 W
- Weight: 320 gr

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260 1243
Pascal-STD 25 ZB

Pascal-STD 25 ZB *(bidirectional)*

Measurement instrument for controlling differential pressures in low ranges of -25 to +25 Pa. The measurement principle is based on a piezo-resistive silicon membrane.

The continuously measured value goes on a scalable and adjustable analogue output (voltage or current).

- **Analogue** scalable **output** 0…10V / 4…20 mA

Technical data:
- Meas. range: -25 ... +25 Pa
- Output: analogue output
  U : 0/2...10VDC (max.500 Ohm)
  I : 0/4...20mA (max.500 Ohm)

- Power supply: 10.5 ... 35 VDC
- Power consumption
  max. 2.5 W
- Weight: 320 gr

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260 1244
Pascal-STD 100 ZB

Pascal-STD 100 ZB *(bidirectional)*

Measurement instrument for controlling differential pressures in low ranges of -100 to +100 Pa. The measurement principle is based on a piezo-resistive silicon membrane.

The continuously measured value goes on a scalable and adjustable analogue output (voltage or current).

- **Analogue** scalable **output** 0…10V / 4…20 mA

Technical data:
- Meas. range: -100 ... +100 Pa
- Output: analogue output
  U : 0/2...10VDC (max.500 Ohm)
  I : 0/4...20mA (max.500 Ohm)

- Power supply: 10.5 ... 35 VDC
- Power consumption
  max. 2.5 W
- Weight: 320 gr

Pascal-STVS 25 ZB *(bidirectional)*

Measurement instrument for monitoring of differential pressures in low ranges of -25 to +25 Pa (bidirectional). The measurement principle is based on a piezo-resistive silicon membrane.

The exceeding or under-running of the configurable alarm thresholds activate the 2 integrated relay switches and the status is displayed with the corresponding LED.

- 2 x **relays output** for switch/alarm 48VDC / 2A
- Additional **LCD screen** on the instrument

260 1245
Pascal-STVS 25 ZB

Technical data:
- Meas. range: -25 … +25 Pa
- 2 selectable thresholds red/green LED indicators
- 2 relays (close/make contact)

- Power supply: 10.5 ... 35 VDC
- Power consumption
                    max. 2.5 W
- Relays contacts: 2 x 48V, 2 A
- Weight: 320 gr

Pascal-STVS 100 ZB *(bidirectional)*

Measurement instrument for monitoring of differential pressures in low ranges of -100 to +100 Pa (bidirectional). The measurement principle is based on a piezo-resistive silicon membrane.

The exceeding or under-running of the configurable alarm thresholds activate the 2 integrated relay switches and the status is displayed with the corresponding LED.

- 2 x **relays output** for switch/alarm 48VDC / 2A
- Additional **LCD screen** on the instrument

260 1246
Pascal-STVS 100 ZB

Technical data:
- Meas. range: -100 … +100 Pa
- 2 selectable thresholds red/green LED indicators
- 2 relays (close/make contact)

- Power supply: 10.5 ... 35 VDC
- Power consumption
                    max. 2.5 W
- Relays contacts: 2 x 48V, 2 A
- Weight: 320 gr

Accessories

Pascal*Tool*-WIN
Configuration program for Windows

Configuration program Pascal*Tool*-WIN for instrument set-up and calibration

->Delivered on a CD.

111 6848 **Software**

Requirements:

Windows PC with CD drive

Windows 95 / NT / 2000 / XP / Vista / Windows 7

Usable with Pascal STS, STVS, STD, STV / Z & ZB

External power supply

External power supply, for voltage range 100 to 240 VAC with exchangeable plugs EU/US/JP.

From the secondary side this power supply can be connected directly to all Pascal ST/Z types.

252 4210
power supply EU/US/JP

Technical data:
- Primary side (plug):
- Voltage range: 100 ... 240VAC
- EU/US/JP plug
- Secondary side (open end cable) :
- Voltage: 24V DC +/- 5%
- Cable ends unshielded and ready for connection.
- Weight: 90 gr

Programming cable to PC (DB9)

Programming cable for connecting a PC to all *Pascal-ST/Z types.*

111 6849
PC cable

Composed of:

- Cable length: 1,5 m
- Special stereo plug on Pascal
- D-Sub 9 plug on the PC side
- Weight: 95g

Factory calibration
at 3 measurement points

Factory calibration and check on a checking station under standard conditions including appropriate documents und certificates.

111 7603
Certificate

Factory calibration including certificate at 3 measurement points.

The tests are done by a calibrated and certified reference differential pressure gauge.

Customer specific configuration

On demand, specific configurations can be defined as factory settings.

All requested parameters must be provided in advance in a specially prepared Excel spread sheet form.

111 6074
Configuration

The Excel-based form should be filled in to ensure a correct configuration.

PascalMaxx „membrane"
differential pressure measurements instruments
for clean rooms and HVAC applications

Differential pressure measurement, made easy!

The *Pascal*Maxx, a measurement instrument for pressure ranges up to 2000 Pa, which is typically used in HVAC (Heating, Ventilation, Air Conditioning) or clean room applications (50 Pa version), is provided with the most modern technology. Thanks to the high quality membrane sensor, optimised measurement electronics and **integrated automatic zero-point calibration** this device is able to measure pressure differences at high levels with best accuracy, repeatability and stability.

Various functions, which can be chosen and set by the front keypad buttons make this system extremely versatile and adaptive. For each application, even the most specific, this instrument can be configured and integrated perfectly.

Main features:

Measurement ranges	:	**-50..+50 Pa / 0...+500 Pa / 0...+2000 Pa**
Measurement accuracy	:	+/-50 Pa : +/-0.5% *(of the full scale)*
at +20°C		500 Pa : +/-0.25% *(of the full scale)*
		2'000 Pa: +/- 0.5% *(of the full scale)*
Offset drift	:	< 2 Pa / year *(automatic zero calibration)*
Configuration	:	by keypad buttons

Differential pressure measuring system Pascal*Maxx*

Accurate, fast, versatile, adaptive, robust, stable, cost efficient

With the new Pascal*Maxx*, Novasina widens its product line. After the Hygro*Maxx* for rel. humidity and temperature measurement Novasina launches now the new differential pressure measurement instrument for ranges up to 2'000 Pa.

The Pascal*Maxx* outstands by its versatility and easy operability. A real added value is offered by the **integrated fully automatic zero-point calibration system**, which is adjusting drifts continuously and makes the measurement device stable and insensitive to mounting position.

Other features:

- scalable analogue output U/I
- relay contact for alarm threshold
- setting of contact status of relay (NO / NC)
- possibility of a 2 point control
- password protection system
- 2 point calibration capability (zero and gain)
- big, clear readable LCDisplay

Applications:
- **Clean room pressure control**
- **HVAC filter and fan belt monitoring**
- **HVAC flap controls**
- **air flow in ducts with pitot tube**
- **leak detection systems**

Technical data:

Dimensions:	110x118x50 mm
Weight:	approx. 200 g
Meas. ranges:	-50…+50 Pa
	0... +500 Pa
	0...+2000 Pa
Max. resolution:	0.1 Pa *(50 / 500 Pa range)*
	1 Pa *(2000 Pa range)*
Meas. accuracy:	50: +/-0.5% *(of full scale)*
at +20°C over	500: +/-0.25% *(of full scale)*
full meas. range	2000: +/-0.5% *(of full scale)*
Temperature effect:	50 : +/- 2% of m.v / °C
	500 : +/- 1% of m.v / °C
	2000 : +/- 1% of m.v./ °C
Offset-Drift :	< 2 Pa / year with automatic zero calibration
Max. overpressure:	50 : +/- 25'000 Pa
	500 : +/- 25'000 Pa
	2000 : +/- 50'000 Pa
Operating temp.:	0...50°C
Power supply:	19.2 ... 28.8 VDC
Protection:	IP 41 / EMC

*Pascal*Maxx

*Pascal*Maxx 50 Z *(bidirectional)*

260 0955
PascalMaxx 50 Z

Measurement instrument for monitoring and controlling the differential pressure in rooms. Measurement range -50 to +50 Pa **(bidirectional)**. The measurement principle is based on a piezo-resistive silicon membrane. Together with the analogue signal output U/I this instrument is provided with an integrated 230V relay, whose contact thresholds can be freely set by the device keypad buttons. The big, clear LCDisplay facilitates the reading of the measurement values.

- 1 relay output for switch/alarm 230 VDC / 2A
- Big LCD screen incl. menu configuration
- 1 scalable analogue output 0…10V or 4..20mA

Technical data:
- Measurement range:-50..+50 Pa
- 1 adjustable threshold
- 1 analogue output U/I

- Power supply: 19.2 ... 28.8 VDC
- Power consumption max. 2 Watt

- Relay: 230V, 2 A
- Weight: approx. 200 gr

*Pascal*Maxx 500 Z

260 0091
PascalMaxx 500 Z

Measurement instrument for monitoring and controlling the differential pressure in HVAC applications. Measurement range 0 to +500 Pa **(unidirectional)**. The measurement principle is based on a piezo-resistive silicon membrane. Together with the analogue signal output U/I this instrument is provided with an integrated 230V relay, whose contact thresholds can be freely set by the device keypad buttons. The big, clear LCDisplay facilitates the reading of the measurement values.

- 1 relay output for switch/alarm 230 VDC / 2A
- Big LCD screen incl. menu configuration
- 1 scalable analogue output 0…10V or 4..20mA

Technical data:
- Measurement range: 0 ... 500 Pa
- 1 adjustable threshold
- 1 analogue output U/I

- Power supply: 24V DC $\pm$ 25%
- Power consumption max. 2.5 Watt

- Relay: 230V, 2 A
- Weight: approx. 200 gr

*Pascal*Maxx 2000 Z

260 0083
PascalMaxx 2000 Z

Measurement instrument for monitoring and controlling the differential pressure in HVAC applications. Measurement range 0 to +2000 Pa **(unidirectional)**. The measurement principle is based on a piezo-resistive silicon membrane. Together with the analogue signal output U/I this instrument is provided with an integrated 230V relay, whose contact thresholds can be freely set by the device keypad buttons. The big, clear LCDisplay facilitates the reading of the measurement values.

- 1 relay output for switch/alarm 230 VDC / 2A
- Big LCD screen incl. menu configuration
- 1 scalable analogue output 0…10V or 4..20mA

Technical data:
- Measurement range: 0..2'000 Pa
- 1 adjustable threshold
- 1 analogue output U/I

- Power supply: 24V DC $\pm$ 25%
- Power consumption max. 2.5 Watt

- Relay: 230V, 2 A
- Weight: approx. 200 gr

Accessories

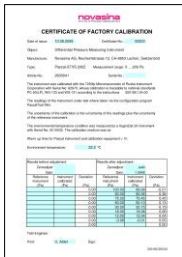### External power supply

252 4210
power supply EU/US/JP

External power supply, for voltage range 100 to 240 VAC with exchangeable plugs EU/US/JP.

From the secondary side this power supply can be connected directly to all PascalMaxx types.

Technical data:
- Primary side (plug):
- Voltage range: 100 ... 240VAC
- EU/US/JP plug
- Secondary side (open end cable) :
- Voltage: 24V DC +/- 5%
- Cable ends unshielded and ready for connection.
- Weight: 90 gr

Factory calibration
at 3 measurement points

Factory calibration and check on a checking station under standard conditions including appropriate documents und certificates.

111 7603
Certificate

Factory calibration including certificate at 3 measurement points in dP on 1 temperature

The tests are done by a calibrated and certified reference differential pressure gauge.

Spare plug set to Pascal*Maxx*

Spare plug set for **Pascal*Maxx*** PCB, for power supply, analogue outputs and relay.

260 0096
Spare plug set

Composed of:

Plug : 2 pole power supply
         3 pole relay
         4 pole analogue output
Weight : total 20 g

Filter set

Protection filter for applications with high pollution.

The filter hoses can be connected with the connectors and the main hoses to the instrument nozzles.

260 0097
Filter set

Composed of:

- 2 pcs hose with filter

- 2 pcs Ø4 / Ø4 mm
  hose connector

- 2 pcs Ø4 / Ø6 mm
  hose connector

*Cali*Box 200

Portable *differential* pressure calibrator & reference measurement instrument

This new differential **pressure generator and reference instrument** has been designed for laboratories as well as for mobile use in clean rooms. Thanks to its rechargeable battery the device can be operated up to 48 hours independent from any external power source.

At the push of a button, the generator becomes a real reference measurement device, if required also available with accredited certificate. The internal sensor operates with high accuracy and long term stability, which is achieved with a combination of a high quality sensor element and a fully automated zeroing system. This makes the instrument not just accurate but also maintenance free!

But the CaliBox 200 offers more! Its steady and stable pressure generation allows a calibration of static membrane and dynamic mass flow sensors. Hence this all-rounder can be used for most of the differential pressure measurement technologies. Other strengths are the mechanical and pressure robustness.

Main features:

Pres. Range: **0...200 Pa** (uni-directional)   *Generator / Measurement*

Accuracy   : typical <= 0.15 Pa

Mobility   : rechargeable battery

Versatility : can be used for membrane & mass flow sensor technology

Simplicity   : configuration by buttons & PascalTool WIN software

CaliBox 200
Mobile calibrator for dP sensor calibration & adjustment

Flexible, accurate, fast, versatile, adaptive, robust, stable, cost efficient

This cost efficient CaliBox 200 is an universal solution suits perfectly for every calibration professional, who wants to perform an on-site calibration.

The CaliBox 200 is delivered in a robust carrying case including all accessories such as hoses, nozzles, tools, PC software etc. The differential pressure is set by a precision control button. The calibrator is connected by a hose to the test specimen. During the process the pressure is always kept stable with no need to build up the same pressure again if the test sample is changed. This permits to calibrate efficiently several specimens in series.

The robust carrying case protects the sensing parts and an integrated valve system protects the sensor from overload pressure. In addition the CaliBox 200 provides a scalable and adjustable analogue output, which can be used to connect external devices such as data loggers, PC, laptops etc.

Technical data:

Dimensions:	360 x 304 x 194 mm
Weight:	approx. 7.30 kg
Meas. ranges:	0...+200 Pa
Max. resolution:	0.01 Pa
Meas. accuracy: at +20°C	typical <= 0.15 Pa
Temperature effect:	<= 0.03 Pa /°C +/- 0.015% *(of full scale)*
Offset-Drift :	<= 0.15 Pa / year *(automatic zero-point cal.)*
Hysteresis :	typical 0.15 Pa / year
Operating temp.:	0...50°C *(not condensing)*
Power supply:	AC : 100…260 VAC DC : LiFePo4 battery
Analogue Out :	0/2…10V (max. load 10k)
Digital interface:	RS-232
Protection :	IP 30 (open) IP 54 (closed)

Applications:
- **on site pressure generation**
- **on site pressure reference device**
- **calibration laboratory instrument (with accreditation)**
- **on site calibrator for dP sensor calibration (range 0 to 200 Pa)**
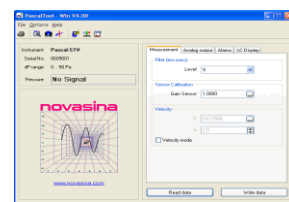
Configuration with PascalTool WIN: can be performed with a Windows PC running Windows 95, 98, NT, 2000, XP, Vista, 7, 10.

Mobile differential pressure calibrator

CaliBox 200   dP calibrator

Mobile, battery powered differential pressure generator and reference instrument to calibrate static (membrane) and dynamic (mass flow) differential pressure sensors within range of 0 to +200 Pa. A robust carrying case protects the internal dP sensor and air generator. The instrument delivered with a factory certificate

(certificate with accreditation as option).

Included:
- Battery charger 100...260 VAC incl. power cable
- 4 / 5 / 8 mm tubes 2m length and nozzle
- 2 x 4 mm hoses, length 2m
- RS-232 interface cable for connection with PC
- CD with PascalTool WIN for PC
- Operation manual

260 0538 CaliBox 200

Technical data:
- Dimensions:
  360x304x194 mm
- Weight: approx. 7.30 kg
- Power AC : 100…260 VAC
  DC : LiFePo4
  battery
- Meas. range: 0...+200 Pa
- accuracy: typ. <= 0.15 Pa
  at +20°C

Spare Parts

Power supply 90...260V Charger

External battery charger for the internal LiFePo4 battery (25.6V / 10Ah) with main plug power input from 100…360 VAC
50/60 Hz

260 0643 Battery charger

Technical data:
Weight: approx. 7.30 kg
Dimensions: 135 x 90 x 50 mm

Input :   90 ... 260VAC
                    Euro plug
Output :   29.2 VDC / 3A

Charging time :   < 3 hours

Programming cable to PC (DB9)

Programming cable for connecting a PC to a CaliBox 200.

111 6849 PC cable

Composed of:
- Cable length: 1,5 m
- Special stereo plug on Pascal
- D-Sub 9 plug on the PC side
- Weight: 95g

PascalTool-WIN
Configuration program for Windows

Configuration program PascalTool-WIN for instrument set-up and calibration

->Delivered on a CD.

111 6848 Software

Requirements:

Windows PC with CD drive

Windows 95 / NT / 2000 / XP / Vista / Windows 7, 10

Connecting nozzle straight

Straight connecting diameter changing nozzle from 6 mm to hose with inner diameter 8 mm (standard hose diameter for Novasina Pascal gauges).

111 6332 Nozzle straight

Technical data:
- Material: Plastic / FPM
- Diam. reduction from 8 to 6 mm
- Fixable with a cable clamp
- Dimensions: ø 10/8/5 x 12 mm
- Weight :   1g

SCS calibration
at 11 measurement points

Instrument calibration by an accredited laboratory including all needed documentation and certificates.

<u>Note:</u>
Novasina collaborates with the Swiss SCS accreditation organisation, which is compatible with all major international accredited institutes of metrology.

on demand SCS calibration

Technical data:

SCS calibration including certificate at 11 measurement points.

Calibration and documentation is done by an accredited Swiss laboratory

Product overview - dP transmitters / calibrators / displays

Instrument	Parameter	Industry	Applications	Main features
PascalMaxx 50/ 500/ 2000 Z	dP (diff.press)	• Pharmaceutical • Textile • Chemical • Medical • Hospitals • Semiconductor	• Clean room pressure control • HVAC installations • Filter saturation monitoring • Fan belt monitoring • Air speed control • Air locks	• Good accuracy • Big clear display • 1 scalable analogue output • 1 relay contact • Automatic zero-point calibration • Calibration 2 dP points • Integrated dust particle filter • Intuitive menu structure • Password protection
Pascal-ST 25 / 100 ZB	dP (diff.press)	• Pharmaceutical • Semiconductor • Chemical • Medical • Health Care • Power Plants	• Clean room control • Filter saturation monitoring • Fan belt monitoring • Air speed control • Air locks • Specific OEM applications	• High accuracy for clean rooms applications • 1 scalable/adjustable AO (STV/STD model) • 2 relay contacts (STVS model) • Automatic zero-point calibration • Calibration 2 dP points • Integrated dust particle filter • Calibration by Windows Pascal*Tool* WIN • Password protection
CaliBox 200	dP (diff.press) Calibrator & reference instrument	• Pharmaceutical • Semiconductor • Chemical • Medical • Health Care	• On-site calibration in clean rooms • Calibration in cal. laboratories • Use as reference instrument (also available with certificate)	• Highest accuracy and stability • High versatility for mass flow & static instruments • 2 in one - calibrator and reference instrument • Integrated auto-zero calibration • Integrated dust particle filter • Scalable / adjustable analogue output • High performance battery 48 hours capacity • Robust carrying case