MEASURING INSTRUMENTS

Export General Catalogue

ABOUT US

For more than 45 years, Sauermann Group has designed, manufactured and sold products and services dedicated to the industrial and HVACR markets. The Group specifically focuses on the detection, measurement and control of indoor air quality (IAQ).

Sauermann Group operates two main brands:
- The **Sauermann** brand, through condensate removal pumps, instruments and accessories, primarily addresses the needs of Heating, Ventilation, A/C or Refrigeration contractors.
- The **Kimo** brand, through measuring instruments, meets the air management needs in light commercial and industrial installations.

HIGH ACCURACY
UNMATCHED RELIABILITY
MULTIPLE APPLICATIONS

Measurement instruments: Sauermann measurement instruments monitor a broad spectrum of indoor air quality parameters and serve a wide range of applications, from building ventilation (heating and air conditioning) systems, to cold-chain installations and combustion gas analysis. Backed by our testing laboratories and in-house research and development programme, Sauermann instruments deliver the accuracy and reliability that HVACR engineers need.

LOW SOUND LEVEL
LOW FAIL RATE
HIGH PERFORMANCE

Condensate management solutions: Safe and effective condensate management for air quality systems can be a challenge. Sauermann pumps are designed to look good, while our patented piston technology delivers whisper-quiet operation and unrivalled reliability.

North America
● ● Sauermann N.A. Corp., New York City, Yardley, PA, USA

EMEA – Europe, Middle East & Africa
● Si Invest SA, Brussels, BELGIUM

● ● Sauermann Industrie S.A.S, Chevry-Cossigny, Montpon, FRANCE

● Sauermann GmbH, Leingarten, GERMANY

● Sauermann UK Ltd., Blackpool, UNITED KINGDOM

● Sauermann Iberica, Barcelona, SPAIN

● Sauermann Italia S.r.l, Bologna, ITALY

Asia Pacific
● ● Sauermann China, Shanghai (Jiading & Pudong), CHINA

● Sauermann Australasia, Sydney, AUSTRALIA

Content

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Combustion gas analyzers

A new degree of efficiency

Our combustion gas analyzers are ideal for maintaining combustion equipment, covering the full range of operations in residential, commercial and industrial applications.

Sauermann offers a range of compact and intuitive analysers to enhance your performance.

Sauermann's combustion gas analyzers feature the latest digital and metrology technologies, making measurements more reliable and cutting the amount of time heating engineers need to spend on-site. A user experience like no other!

Applications

- Boilers
- Burners
- Water heaters
- Gas and diesel engines
- Furnaces
- Industrial kilns
- Industrial heating systems
- Incinerators

Residential

Commercial

Industrial

Warranty

2-YEAR WARRANTY

All devices come with a two-year warranty against manufacturing defects (subject to assessment by our after-sales department).

To find out more about our extended warranties and maintenance plans, please visit our website, or contact our Customer Service Department.

Features

Add a digital edge to your combustion analysis

Auto pump cut-off for high CO levels (adjustable)

Predictive maintenance with estimated sensor life & calibration reminders

Draft & differential pressure measurements

Mobile phone app for real-time remote display & control

Calculations for Combustion Efficiency, Excess Air & CO_2%

Data management with automatic logging & report creation

	Si-CA 030	Si-CA 130	Si-CA 230
LCD display size	2.8"	4.3"	4.3"
Display resolution	320 x 240 pixels	480 x 272 pixels	480 x 272 pixels
Touch-screen display	No (5 buttons)	Yes (+ on/off button)	Yes (+ on/off button)
Dimensions (H x W x D)	9,9 x 19,4 x 4,9 cm 7.5 x 3.5 x 1.6"	9,9 x 19,4 x 4,9 cm 7.5 x 3.5 x 1.6"	11,2 x 28 x 5,5 cm 11 x 4.3 x 2"
Weight	350 g - 12 oz	350 g - 12 oz	825 g - 30 oz
No. of cells	Up to 3 (O_2, CO, NO)	Up to 3 (O_2, CO, NO, Low NO)	Up to 6 (O_2, CO, NO, Low NO, NO_2, Low NO_2, SO_2, Low SO_2, CxHy, H_2S)
Max. CO measurement	8000 ppm	8000 ppm	50 000 ppm with dilution
CO dilution	-	-	✓
Field replaceable pre-calibrated sensors	-	✓	✓
Flue gas velocity with Pitot tube	-	✓	✓
Measurement storage	Smartphone	Internal: 2000 data points + Smartphone and PC	Internal: 2000 data points + Smartphone and PC
PC software (wireless & USB)	-	✓	✓
Smartphone app (wireless)	✓	✓	✓
Combustion applications	Residential, Commercial	Residential, Commercial	Commercial, Industrial

To see our extensive range of other measurement instruments for heating applications, go to www.sauermanngroup.com

Combustion gas analyzers

A new degree of efficiency

All the essentials for combustion gas analysis
Si-CA 030

LIGHTWEIGHT
350 g

- Calculated CO_2% value
- CO safety monitoring in ambient air
- Combustion efficiency and excess air calculations
- Emissions values adjusted for reference O_2

- NOx capable with NO sensor
- Quick and easy pump On/Off control

HD Color display

Auto pump cut-off for high CO levels

Comprehensive, versatile analyzer with touch-screen display
Si-CA 130

- Calculated CO_2% value
- CO safety monitoring in ambient air
- Combustion efficiency and excess air calculations
- Emissions values adjusted for reference O_2

- NOx and low NOx capable (optional)
- One Touch Pump On/Off with Purge
- Graphical data display
- Customisable gas analysis screen

TOUCH-SCREEN DISPLAY

HD Color display

Field replaceable precalibrated sensors

State-of-the-art, industrial emissions analyzer
Si-CA 230

TOUCH-SCREEN DISPLAY

- Ergonomic, light weight and durable design
- One touch pump On/Off with purge
- Graphical data display
- Customisable gas analysis screen

- Emissions values adjusted for reference O_2
- CO safety monitoring in ambient air

Total NOx & Low NOx Capable

Field Replaceable Pre-Calibrated Sensors

Mobile app

Sauermann Combustion

The Sauermann Combustion app lets you control your Si-CA analyzer remotely, view measurement results in real time, and customise them before exporting in the format of your choice.

- PC software with USB and wireless connectivity
- Fast, easy wireless connection
- Remote live view of combustion analysis data as list or graph
- Remote control to change settings
- Data saving, including automatic logging
- Report creation in PDF, CSV (for Excel) and XML formats

FREE
APP
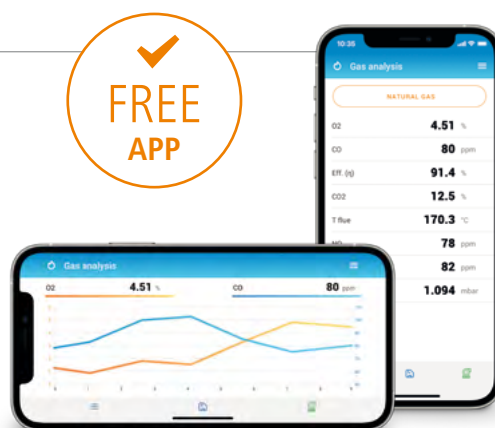
Download Sauermann Combustion app

Download on the App Store

GET IT ON Google Play

Accessories

Customize your own analyzer

Our combustion gas analysers are available in many different configurations, with a wide range of accessories to choose from. Contact our Customer Services team for more information about our kits and accessories, and for guidance on choosing the right options for your needs.

Smart air temperature probe with 2 m cable
Ambient CO probe
Ambient CO_2 probe

180 mm flexible probe

Draft probe

180 mm, 300 mm & 750 mm, and 1 m & 1.5 m probes

Differential pressure kit

Smoke pump

Double tube extension, 3 m

Wireless printer

SCU for condensate removal

HVACR Portable

Instruments

**Temperature / Humidity / Pressure / Air velocity / Airflow /
Air quality / Gas detection / Light / Tachometry**

Class 50, 110, 210 and 310

The range of portable devices is ideal for technicians responsible for maintaining heating, ventilation, and cooling installations.

- Wireless and Smart+ probes
- Graphical wide screen
- Data recording
- Ergonomic design

Graphical display

Magnetic protective cover

IP54 housing

Interchangeable probes & modules

Datalogger

Configure / Measure / Data processing

- Configuration of instruments
- Instruments management
- Reports creation
- Customized channels

- Insert commands
- Insert legends and statistics
- Add mathematical functions

Class 50, 110 and 210

Hygrometers
HD 50 / 110
HQ 210

- 3 to 98 %RH
- -40 to +180 °C
- -50 to +80 °C$_{td}$
- CO: 0 to 500 ppm
- CO_2: 0 to 5000 ppm

Luxmeters
LX 50

Illuminance measurement

- 0 to 10 000 lux
- 0 to 929 fc

Tachometers
CT 50 / 110

- Optical: 60 to 60 000 rpm
- Contact: 30 to 3000 rpm

Refrigerant leak detector
Si-RD3

- Detection of all the HCFC and HFC refrigerants
- Detection of mixtures 5% hydrogen - 95% nitrogen (Nidron 5)
- Heated diode sensor
- Flexible hose

Manometers
MP 50 / 51 / 55 / 110 / 111 / 112 / 115 / 120 / 130 / 210

- Differential pressure
- ±500 Pa to ±2000 mbar
- Air velocity with Pitot tube
- 3 to 85 m/s
- Atmospheric pressure
- 800 to 1100 hPa

Anemometers
LV 50 / 110 / 111 / 117 / 130
VT 50 / 110 / 115 / 210

- Hotwire and telescopic hotwire
- 0.15 to 30 m/s
- Vane probes: Ø14, 70, 100 mm
- 0.3 to 35 m/s
- Airflow: 0 to 99 999 m³/h

The + of class 210 and 310

Designed for the field
An overmoulding made of elastomere protects the instrument, guarantees shockproofing.

Nonstop measurements
This generation of instruments has an interchangeable and rechargeable Li-ion battery.

Expandable memory (AMI 310)
Internal memory of 1000 datasets of 20 000 measuring points. Built-in location for a micro-SD memory card.

Interchangeable probes
The probes use a mini-Din connecting cable which is compatible with all probes.

Interchangeable modules

1. Climatic conditions
2. Thermocouple (4 channels)
3. Pressure
4. U Coefficient

Accessories

ABS transport case

Protective housing

Backpack

Measuring cones

Debimo blades

Adjustable wedge for telescopic vane and hotwire probes

Pitot tubes

Multi-function

Class 310

AMI 310

AMI 310 is a multi-probe instrument which can measure up to 6 parameters simultaneously.

Wireless probes

Interchangeable probes & modules

Graphical display

Data processing software

Micro-SD card

Colour wide screen

- Pressure:
  ±500 Pa / ±2500 Pa / ±10 000 Pa
  ±500 mbar / ±2000 mbar
- Thermocouple: -200 to +1760 °C
- Pt100: -200 to +600 °C
- Humidity: 3 to 98 %RH

- CO: 0 to 500 ppm
- CO_2: 0 to 5000 ppm
- Air velocity: -5 to 35 m/s
- Airflow: 0 to 99 999 m³/h
- Gas detection: 0 to 10 000 ppm
- Tachometry: 30 to 60 000 rpm

- Dew-point: -50 to +100 °C$_{td}$
- Wet temperature: -50 to +100 °C$_{tw}$
- Enthalpy: 0 to 10 000 kJ/kg
- Combination ratio: 0 to 10 000 g/kg
- Calculation of U coefficient and WBGT index

Thermometers

Portable instruments

Temperature

Class 210
TM 210

The differential thermometer TM 210 allows the temperature of 4 thermocouple probes to be taken simultaneously and the differential value to be displayed.
This instrument is suitable for any process where it is necessary to control the temperature at several points.

- Temperature: -200 to +1760 °C
- 2 Pt100 channels
- 1000 datasets storage
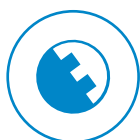- Calculation of U coefficient
- 4 thermocouple inputs

Wireless probes

Elastomere overmoulding
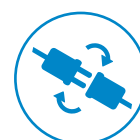
Data processing software

Interchangeable measurement modules

Thermocouple module
4 inputs

U coefficient module

SMART+ probes

TR 61/62

- 1 or 2 inputs
- Pt100
- -100 to +400 °C

TK 61/62

- 1 or 2 inputs
- Thermocouple K, J, T, S
- -200 to +1760 °C

Hold/Min/Max functions

Large choice of probes

General use

- -20 to 40 °C
- Penetration probe

Infrared
KIRAY 100 / 200 / 300

- Diagnose, inspect and check any temperature, with the advantage of using ''no-contact'' technology
- From -50 to +1850 °C

Indoor air quality monitors

Service, Residential & Commercial Applications

IAQ analysis

CO meters
CO 50

- CO: 0 to 500 ppm
- Temperature: -20 to +80 °C
- Hold function
- 2-line display

CO 110

- CO: 0 to 500 ppm
- Temperature: -20 to +80 °C
- CO max display, two configurable alarm thresholds
- 4-line display

Thermo-hygrometer - Air quality
HQ 210

- Hygrometry, temperature, CO_2 & CO gases and air velocity measurement (depending on models)
- Up to six measurements simultaneously
- Two inputs for Pt100 temperature (-200 to +600°C)
- Large graphic display
- Interchangeable measurement modules: 1 device = several possible ranges & parameters
- Supplied with calibration certificate

Air quality
AQ 110

- CO_2: 0 to 5000 ppm
- Temperature: -20 to +80 °C
- Hold function and min-max values, selection of units
- 4-line display

Air flow meter

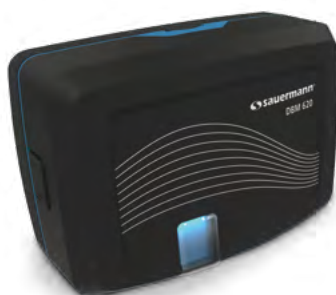## Air flow / Air velocity / Pressure

Air flow meter
DBM 620

Compatible with all air vent types.

- Interchangeable hoods
- Quick and easy mounting
- Simultaneous display of airflow and temperature
- Automatic airflow direction (extraction or air blast)

- From 35 to 4,250 m³/h (11 to 1181 L/s)
- Supplied with 610 x 610 mm hood and transport case

SWIRL airvent

Switch between hoods quickly and easily

Patented folding frame & space-saving hoods storage

Transport case: compact storage system

Easily edit your reports with the SmartKap application

Remote velocity grid

Designed for air velocity measurements on any type of large ceiling vent or diffuser.

- Average air velocity from 24 points
- Telescopic and articulated pole: maximum length 2.05 m, 0 to 90°, positioning strut
- Backpack

4 optional hoods are available:

- 2.36 x 2.36 ft (720 x 720 mm)
- 2.36 x 4.33 ft (720 x 1320 mm)
- 1.38 x 4.99 ft (420 x 1520 mm)
- 3.35 x 3.35 ft (1020 x 1020 mm)

Data loggers

Kistock

Temperature / Humidity / Pressure / Air quality / Light / Current / Voltage / Pulse / Water pressure

Up to 5 YEARS battery life

Multi Application

2 programmable alarm tresholds

Up to 2,000,000 measuring points

Kilog software (option)

Anti-theft system

With the range of Kistock stand-alone data loggers and Kilog software, you can collect and analyse all the metrics of industrial climate control engineering processes, monitor the climatic environment of a chamber and respond to the traceability requirements of agri-food and pharmaceutical industries during transport.

ACCESSORIES

Probes   **KNT 320**   **Kilog and Kilog-Lite**   **Anti-theft kit**

Key benefits

Measuring element

Calibration data

Smart plug technology

Mobile application

- Wireless pairing
- Data visualisation
- Free download

Smart and interchangeable
probes (class 320)

- Advanced technology
- Integrated calibration data

Mini
KH 50 / KT 50

Temperature, humidity

- -40 to +70 °C
- 5 to 95 %RH
- USB connection
- KH 50: IP20
- KT 50: IP65

USB
KH 120 / KT 120

Temperature, humidity

- -40 to +70 °C
- 5 to 95 %RH
- Integrated software
- USB connector

**KT 50 / KT 120
EN 12830**

Multi-function
KH 220 / KT 220 / KTT 220

Temperature, humidity, water pressure, light, current, voltage, pulse

- -200 to +1760 °C
- 5 to 95 %RH
- 0 to 10 000 lux
- 0 to 20 bar
- 0 to 20 mA, 0 to 600 A
- 0 to 10 V

Interchangeable probes

Connected
KT 320 / KTT 320 / KCC 320
KPA 320 / KP 320-321

Temperature, humidity, pressure, atmospheric pressure, air quality, curent, voltage, pulse

Mobile application

- -200 to +1,760 °C
- 5 to 95 %RH
- 0 to 5000 ppm
- 800 to 1100 hPa
- -10 000 to +10 000 Pa
- 0 to 20 mA, 0 to 600 A
- 0 to 10 V

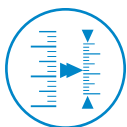**Wireless pairing**

Transmitters

Regulation and monitoring of HVAC

Pressure / Temperature / Humidity / Air velocity and air flow / Air quality / Solar / Light / Atmospheric pressure

Designed and manufactured in France, Sauermann and Kimo's range of transmitters can be used in all industries, in the service sector or in OEM.

From the simplest to the most elaborate, these advanced measuring instruments can be adapted to any type of application thanks to their configuration and calculation possibilities.
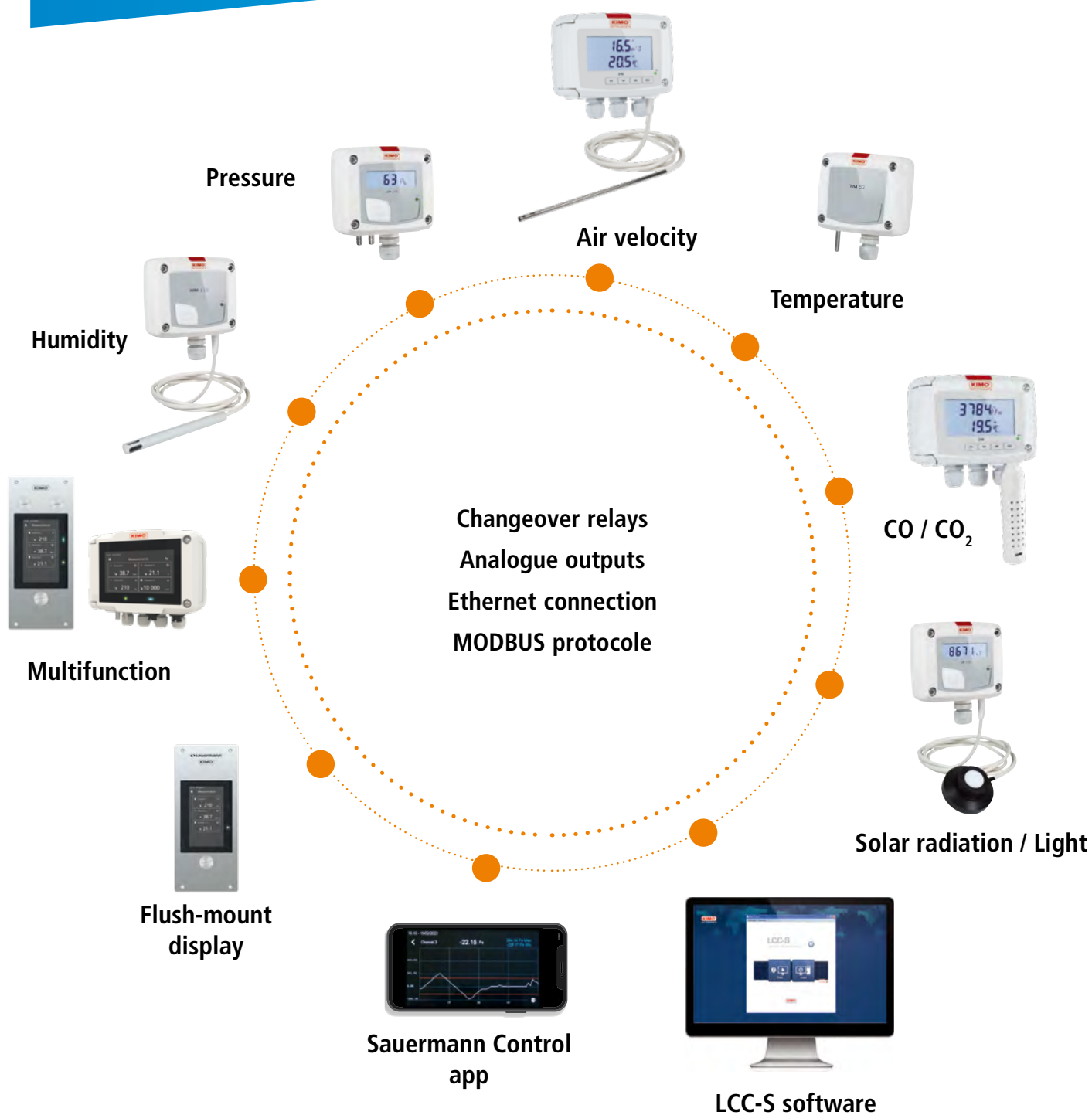
Configurable outputs

Visual and audible alarm

IP65 **Tightness ABS housing**

Overview

Pressure

Air velocity

Humidity

Temperature

Multifunction

CO / CO_2

Changeover relays

Analogue outputs

Ethernet connection

MODBUS protocole

Solar radiation / Light

Flush-mount display

Sauermann Control app

LCC-S software

Monostats & classes 110/210

Transmitter sensors

Pressure
PST / CP 110 / CP 116 / CP 210-R

- ±100 Pa to ±10 000 Pa
- 3 to 85 m/s
- 800 to 1100 hPa (CP 116)
- -100 to +400 °C (CP 210-R)

Humidity
HST / TH 110 / HM 110 / TH 210-R

- 0 to 100 %HR
- -40 to +180 °C

Air velocity
CTV 110 / CTV 210-R

- 0 to 30 m/s
- 0 to 99 999 m³/h
- 0 to +50 °C

Simplified calibration

Electronic board and measuring element
connected to the front side of the sensor,
which allows to configure and calibrate
your device without causing any damage.

Temperature
TST / TM 50 / TM 110 / TM 210-R

- -100 to +400 °C
- IP65 protection

CO / CO$_2$ transmitters

Kimo designed CO / CO$_2$ transmitters in order to meet with requirements of new standards and decrees on air quality.

CO
CO 110 / COST-S

- 0 to 500 ppm

CO$_2$
CO 112 / COT 212-R / CO2ST-S

- 0 to 5000 ppm
- 0 to +50 °C

Solar radiation / Light
CR 110 / LR 110

- 0 to 1500 W/m^2
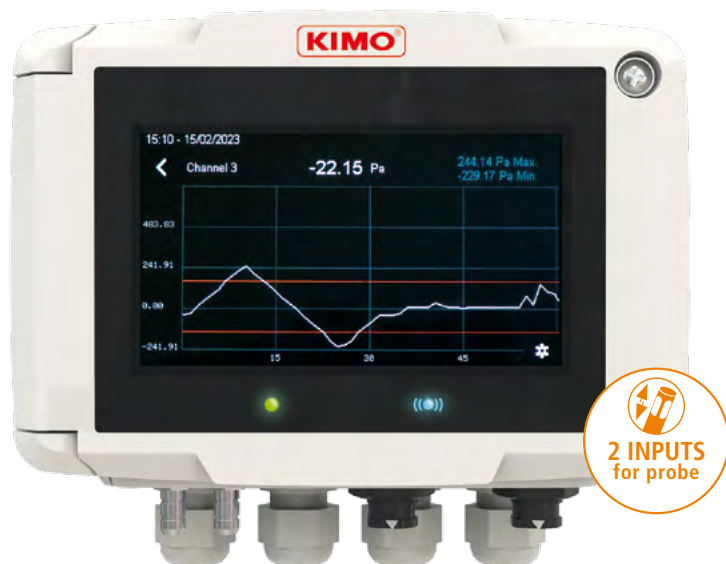- 0 to 10 000 Lux

LCC-S software
Configuration software for monostats, class 110, 210 and 310 transmitters

- Compatible with the whole range
- Configure your devices
- Save data
- View your measurements in real time

- Protection
- Adjustable alarm thresholds
- Save a configuration to apply it to other devices

Multi-function

High-precision transmitters

Multi-function transmitter
Si-C320

Graphical touch screen
Display and measure 4 parameters simultaneously
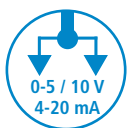IP66 housing, VHP resistant
4 RCR relays (option)
4 analogue outputs
Wireless communication with mobile application (option)

- -10 000 to +10 000 Pa
- 0 to 100 %HR
- -80 to +150 °C
- 0 to 30 m/s
- 0 to 99 999 m³/h
- 800 to 1100 hPa
- CO: 0 to 500 ppm
- CO_2: 0 to 10 000 ppm
- COVT: 0 to 1000 ppb
- CO_2eq: 400 to 2000 ppm
- 800 to 1100 hPa

2 INPUTS for probe

Multifunction for VAC and IAQ applications
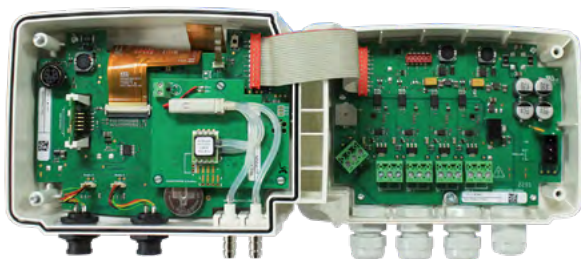
0-5 / 10 V 4-20 mA — **4 analogue outputs**

RS-485 interface for Modbus RTU protocol

4 visual and audible alarms

24 V_{DC} / 24 V_{AC} power supply

Other calculated parameters

- Absolute humidity, dew point, specific humidity, humidity temperature, enthalpy and freezing point.

Interchangeable probes
Si-C320 and Si-CPE320
Temperature / Humidity / Air velocity / CO / CO_2 / Pressure

Flush-mount multi-function transmitter
Si-CPE320

Special for clean room
Front calibration
Simultaneous display of 1 to 3 parameters
ABS IP66 housing, vaporized hydrogen peroxide resistant
3 configurable analogue outputs
MODBUS Output

- Measuring range:
  from -250 to +250 Pa

1 INPUT for probe

Connection to a computer at the front

3 visual and audible alarms

Brushed 316L stainless steel front panel

Touch screen

Flush-mount display
Si-ATE320

Special for clean room
Simultaneous display of 1 to 3 parameters
ABS IP66 housing, vaporized hydrogen peroxide resistant
MODBUS Output

Large display transmitter

1 INPUT for probe

Multi-function transmitter
CA 310

1 SPI-2 or MVA card input
3 RCR relays
Digital output (option)
Supplied with adjusting certificate

- From -10 000 to +10 000 Pa
- From 0 to 100 %HR
- From -50 to +180 °C
- From 3 to 85 m/s
- From 0 to 99 999 m³/h

- CO : from 0 to 500 ppm
- CO_2 : from 0 to 5000 ppm
- From 800 to 1100 hPa
- From 0 to 10 V
- De 0 à 20 mA

Probes for CA 310

Temperature / Humidity / Air velocity / CO / CO_2 / Pressure...

Touch control and mobile application

Full Si-C320 and Si-CPE3220 setup

Trend indicator: up to 4 parameters displayed simultaneously

History: chart display

Touch screen
No physical buttons: better sealing and less mechanical failure

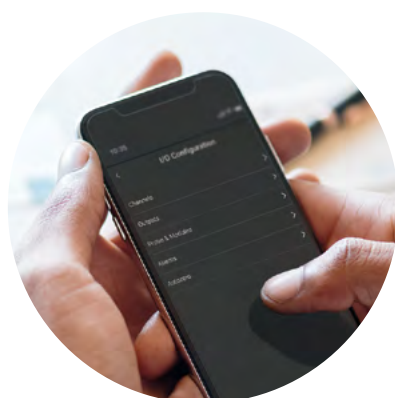**Simultaneous display of up to 4 measurements**
Chart form display

Full device setup

Indicator lights

blue light:
wireless connection

green light:
power on

Sauermann Control app

It is also possible to control and configure the class 320 transmitters with a computer, a smartphone or a tablet via the Sauermann Control application, which allows the user to manage all the device's parameters via its wireless connection module (USB wired for computers). This app can also easily update the firmware of the instrument and its probes.

- Wireless connection with iOS and Android
- Full device control
- Downloading recorded measurements

- One-click firmware update
- Remote measurement viewing

Calibration benches

Pressure / Humidity / Temperature

Pressure generator
GP 500

The pressure generator allows to adjust and calibrate measurement instruments in laboratory or on-site.

- -2 500 to +2 500 Pa
- -10 000 to +10 000 Pa

Laboratory or on-site calibration

Hygrometry bench
GH 500

Calibration of several instruments simultaneously. Multi-probe ventilated measuring chamber.

- 10 to 85 %HR

High accuracy

Automated or scheduled calibration

Salt solutions
KSH11 / KSH44 / KSH85

Humidity source to test class 110, 210 and 310 portable instruments and transmitters.

Temperature

Probes

**Thermocouple / Pt100
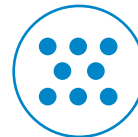Head / Cable / ABS probes**

**CRYO and
Wire probes**

ABS head

Connection head

NORME
IEC 751

Measuring range
-200 to +1150 °C

Calibration
-200 to +1500 °C

Pt100
probes

Thermocouple
probes

Liquid column manometers

Differential pressure

Inclined

- 0-5 to 0-80 mmH$_2$O
- Units: Pa, daPa...

Vertical

- 0-100 mmH$_2$O to 0-2.6 bar
- Units: mbar, Pa...

Differential pressure switch
Si-DPMS

- Setting ranges in Pa:
  20-200, 50-500, 200-1000, 500-2500,
  1000-5000

ACCESSORIES

To fit any installation with
proper connections

- Liquid for manometer
- Tubes, junctions
- Pressure connections, wall-crossing
  connection...

26

Our expertise
Manufacturing / Laboratories / R&D

Customer service portal

For all requests concerning repair, returns or calibration, connect to our Customer Service Portal.

Accessible 24h/7

Quick and simple

Real-time tracking

Sauermann.site/Help

State-of-the-art facilities and highly skilled staff

The Sauermann Group relies on cutting edge expertise, with more than 20 experts working in 1500 m² of testing and calibration laboratories around the world, with production lines in France, the United States and China. Our research and development is conducted in-house by a young team of 20 engineers and 10 forward-thinking technicians. Their quest for innovation and patents is focused on ergonomics, digitalisation and connected devices, along with the constant improvement of the electronic and mechanical quality of our measuring instruments and condensate pumps.

Our in-house laboratories offer testing, adjustment and calibration services for a wide range of measuring instruments.

They are also one of the pillars of our high quality after-sales service. Our after-sales service covers multiple state-of-the-art activities to address all parameters related to indoor air quality.

**Calibration and adjustment**

Repair / maintenance

Hotline

Since more than 45 years, Sauermann has been developing its expertise in metrological services in many fields:

- Temperature
- Hygrometry
- Air flow rate
- Air velocity
- Pressure
- Gas analysis
- Weighing
- Radiometry
- Tachymetry
- Luxmetry
- Electricity

Professional solutions for condensate management and indoor air quality measurement
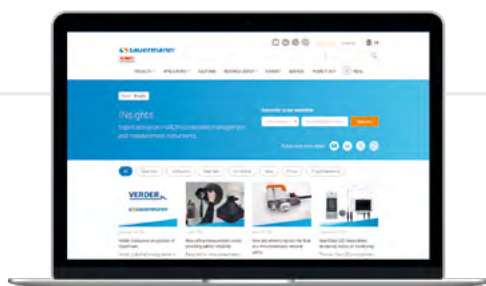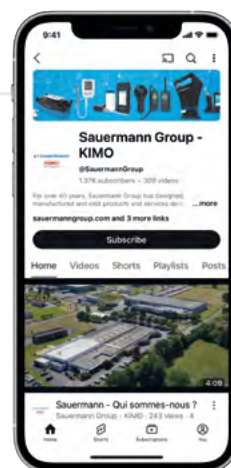
INsights

Case studies, useful information and practical advice for HVACR and indoor air quality professionals.

sauermanngroup.com/en-US/insights

Sauermann on YouTube

Head to our YouTube channel for tutorials, webinars and product guides.

youtube.com/sauermanngroup

Scan me to view all our Sauermann and Kimo catalogues online

To learn more, please visit: **sauermanngroup.com**