# 목록

| Geometric Data LCS Base station | |
|---|---|
| Dimensions (W x D x H)): | 230 mm x 240 mm x 60 mm |
| Mass: | 1.5 kg |
| **Electrical Data** | |
| Power supply | 9...18 V, max. 1 A, with supplied plug-in power supply |
| Interfaces | 1 x USB (virtual COM-Port), 1 x RS232, Uplink to the extension box |
| Protocol | proprietary, access via DLL (Win + Linux) and data logger software or text based, freely definable customer specific protocol possible |
| **Sensor interfaces** | |
| Wired temperature measurement | 5 x digital, for connection of the digital temperature sensors TT-01 of SIOS Meßtechnik GmbH, expandable to 15 probes |
| Wireless temperature measurement | max. 15 wireless temperature transmitters of SIOS Meßtechnik GmbH WT-01 |
| Air pressure / humidity | 2 digital interfaces, for connection<br>• the SB-2x sensor box SIOS Meßtechnik GmbH with air pressure and humidity measurement<br>• pin sensor for humidity<br>• customized third-party sensors on request |

| Parameter temperature sensors | Digital temperature sensors TT-01 | Wireless temperature sensors WT-01 |
|---|---|---|
| Measuring range | 5...35°C or on request | |
| Resolution | 0.1 mK | 1 mK |
| Measuring interval | > 4 s | |
| Sensor types | Pt-100 air and material temperature sensors, customer-specific designs possible | |
| PT100 - Cable length | 3 m, 6 m, 10 m, other lengths on request | 1-1.50 m, (to transmitter) other lengths on request |
| Frequency range | | 868 / 915 / 920 MHz, 3 channels each |
| Power supply | | 9 V block battery |

| Parameter Air pressure / humidity | Sensorbox SB-2x |
|---|---|
| Air pressure measurement | 70 000 ... 110 000 Pa, ± 50Pa |
| Humidity measurement | ± 5%rH (for measuring range 10% - 90%) |
| Dimensions (W x D x H) | 85 mm x 50 mm x 35 mm |

09/2022 · Subject to change.

# Precision Climate Measuring Station

**Also available with wireless sensors**



# LCS - Series

**SIOS**
Meßtechnik GmbH

## Design and Operation

The precision climate measuring station collects the values for temperature, air pressure and  air humidity with highest accuracy. For achieving the technical best possible precision all measuring probes can be calibrated digitally together with the measuring electronic. Optionally wireless temperature sensors can be used as well.

The precision data collection has been primary developed for interferometry, which requires a high precision registration of environmental data – especially temperature and air pressure data. With the precision climate measuring station it is provided also for other applications.
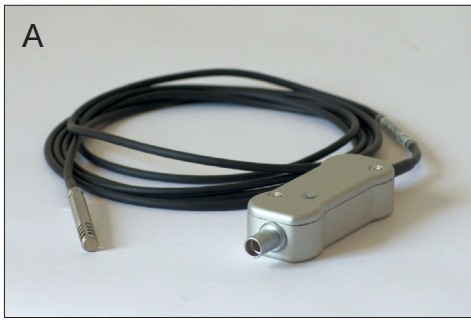
## Applications

High-precision temperature, air pressure and air humidity measurements
- In measuring and calibration laboratories
- For documentation and - where required – compensation during calibration procedures
- For monitoring precision measurement and test setups
- As module for integrating in precision machines

## Technical Data

|  | Precision climate measuring station LCS-01 |
|---|---|
| Dimensions | 230 mm x 240 mm x 60 mm |
| Mass | 1.5 kg |
| Power supply | 100...240 V AC, max. 500 mA |
| Interfaces | 1 x USB (virtual COM-Port), 1 x RS232 |
| Protocol | proprietary, Access via DLL (Win + Linux) and data logger software or text-based, user definable customized protocol possible |
| Sensor interfaces: |  |
| Wired temperature measurement | 4 x digital, for connecting the digital temperature transducers TT-01 of SIOS Meßtechnik GmbH, expandable to 15 sensors |
| Wireless temperature measurement | Max. 15 wireless temperature transmitters of SIOS Meßtechnik GmbH WT-01 |
| Air pressure | 2 digital interfaces, air pressure of SIOS-sensor box SB-10 series or selected sensors from other manufacturers (for example, Setra-470) |
| Air humidity | 2 digital interfaces (shared with air pressure), air humidity of SIOS-sensor box SB-10 series or SHT75 compatible sensors |

|  | Digital Temperature Transducer TT-01 | Wireless Temperature Transmitter WT-01 |
|---|---|---|
| Measuring range | 5...35°C or on request | |
| Resolution | 0.1 mK | 1 mK |
| Measurement uncertainty | ± 50 mK, typical, depending on the kind of calibration | |
| Measuring interval | > 4 s | |
| Sensor designs | Pt100 air and material temperature sensor, customized design possible | |
| Pt100- cable length | 3 m, 6 m, 10 m, customized | 10 cm, 1.5 m, customized (to sender unit) |
| Frequency range | | 868 / 915 MHz, each with 3 channels |
| Power supply | | 9 V monobloc battery |
| Pictures: A: TT-01 with air temperature sensor B: WT-01 with material temperature sensor | | |