

# CO<sub>2</sub> DISPLAY/CL11/CP11



## Benefits

- Measures and logs CO<sub>2</sub>, relative humidity and temperature
- Rotronic HYGROMER® IN-1 humidity sensor
- Up to 40,000 data point memory

## Applications

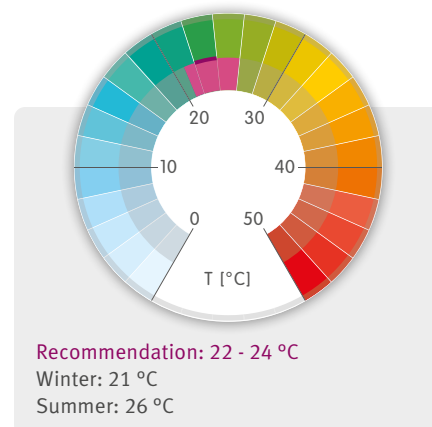
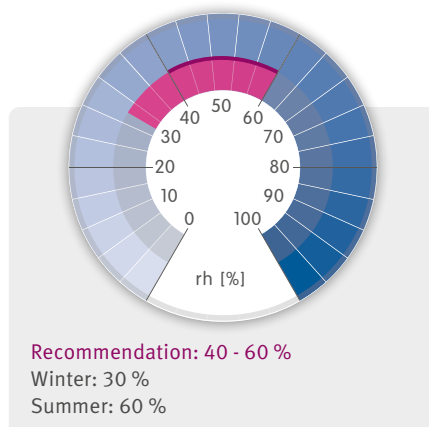
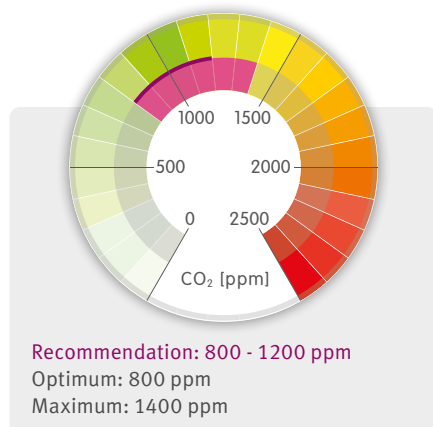
- Indoor air quality: classrooms, kindergartens, meeting rooms, open-plan offices, shopping centers, fitness studios



## General Information

| Order code            | CO <sub>2</sub> Display                                                                                                                                                                                                                                                                    | CL11                                                                                                                                                                       | CP11 |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| Sensors / Calibration | <ul style="list-style-type: none"><li>• HYGROMER® IN-1 humidity sensor</li><li>• Calibration of humidity possible at 35/80 %RH</li><li>• NDIR sensor with automatic calibration (ABC)</li><li>• Manual calibration of CO<sub>2</sub> at 400 ppm</li></ul>                                  |                                                                                                                                                                            |      |
| Display               | <ul style="list-style-type: none"><li>• Large, easy-to-read display of measured values</li><li>• CO<sub>2</sub> indicator for quick recognition of air quality (GOOD/NORMAL/POOR)</li><li>• REC LED to indicate data recording is in progress</li><li>• Display of date and time</li></ul> | Large display with backlight                                                                                                                                               |      |
| Control panel         | Large buttons for easy operation of the measuring instrument                                                                                                                                                                                                                               |                                                                                                                                                                            |      |
| Connections           | <ul style="list-style-type: none"><li>• Port for USB stick for data downloads</li><li>• 12 VDC power supply</li></ul>                                                                                                                                                                      | <ul style="list-style-type: none"><li>• Mini USB port for connection to a PC</li><li>• 5 VDC power supply, for connection of the optionally available AC adapter</li></ul> |      |

## Guidelines for a healthy indoor climate

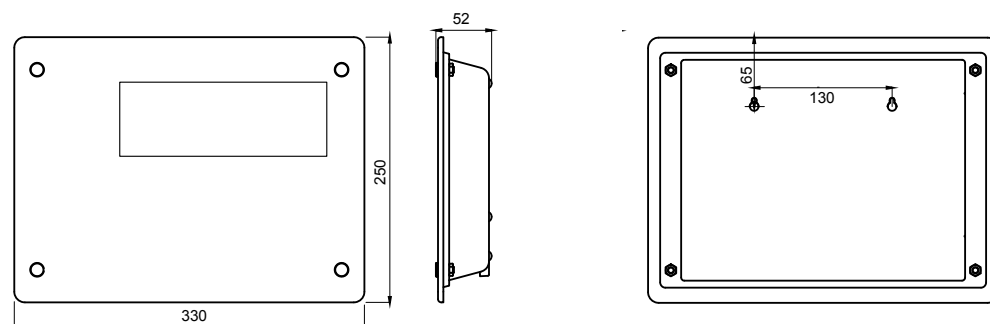


## Technical Information

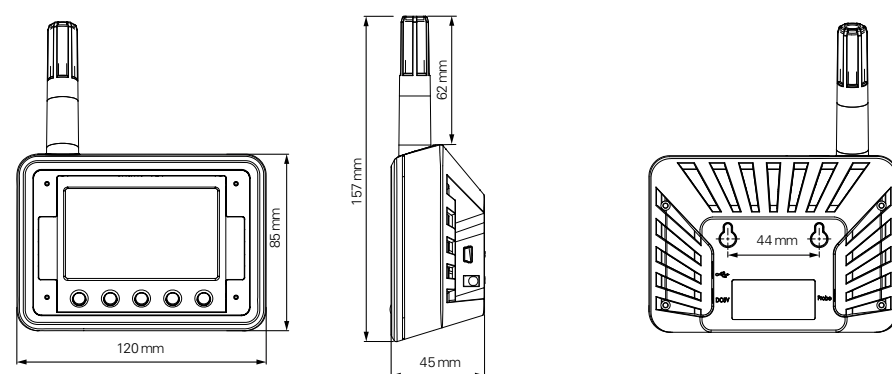
|                                |                                                                                                                        |                                                                                                                        |                                                                                                                                                                                                              |
|--------------------------------|------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                |                                       |                                      |                                                                                                                           |
|                                | CO <sub>2</sub> Display                                                                                                | CL11                                                                                                                   | CP11                                                                                                                                                                                                         |
| General Specifications         |                                                                                                                        |                                                                                                                        |                                                                                                                                                                                                              |
| Type                           | Wall or benchtop display unit                                                                                          | Benchtop display unit                                                                                                  | Handheld device                                                                                                                                                                                              |
| Parameters                     | CO <sub>2</sub> , relative humidity and temperature                                                                    |                                                                                                                        | CO <sub>2</sub> , relative humidity, temperature, dew point & wet bulb temperature                                                                                                                           |
| Application range              | 0...50 °C / 0...95 %rh, non-condensing                                                                                 | 0...50 °C / 0...100 %rh, non-condensing                                                                                |                                                                                                                                                                                                              |
| Clock                          | Real time clock with 4 min. battery backup                                                                             | Real time clock with 2 min. battery backup                                                                             | Real time clock                                                                                                                                                                                              |
| Alarm / Indicator              | Adjustable for CO <sub>2</sub> measurement (visual)                                                                    | Adjustable for CO <sub>2</sub> measurement (visual & audible)                                                          | Adjustable for CO <sub>2</sub> measurement (audible)                                                                                                                                                         |
| Instrument-Specific Data       |                                                                                                                        |                                                                                                                        |                                                                                                                                                                                                              |
| Current consumption            | 700 mA                                                                                                                 | 50 mA                                                                                                                  | 40 mA                                                                                                                                                                                                        |
| Warm-up time                   | <1 min.                                                                                                                |                                                                                                                        |                                                                                                                                                                                                              |
| Memory capacity                | <ul style="list-style-type: none"><li>19,500 values with time stamp</li><li>Automatic recording (%rh/°C/ppm)</li></ul> | <ul style="list-style-type: none"><li>40,000 values with time stamp</li><li>Automatic recording (%rh/°C/ppm)</li></ul> | <ul style="list-style-type: none"><li>18,000 values with time stamp</li><li>Automatic recording (%rh/°C/ppm)</li><li>99 single values with time stamp</li><li>Manual recording (%rh/°C/DP/WBT/ppm)</li></ul> |
| CO <sub>2</sub> Measurement    |                                                                                                                        |                                                                                                                        |                                                                                                                                                                                                              |
| Measurement principle          | Infrared (NDIR) with automatic calibration (ABC)                                                                       |                                                                                                                        |                                                                                                                                                                                                              |
| Measuring range                | 0.....9999 ppm                                                                                                         |                                                                                                                        |                                                                                                                                                                                                              |
| Accuracy at 23 °C ±5 K         | ±30 ppm ±5 % of the measured value @ 0...5000 ppm                                                                      |                                                                                                                        |                                                                                                                                                                                                              |
| Resolution                     | 1 ppm                                                                                                                  |                                                                                                                        |                                                                                                                                                                                                              |
| Adjustment point               | 400 ppm                                                                                                                |                                                                                                                        |                                                                                                                                                                                                              |
| Pressure dependence            | +1.6 % reading per kPa                                                                                                 |                                                                                                                        |                                                                                                                                                                                                              |
| Null drift                     | <10 ppm/year                                                                                                           |                                                                                                                        |                                                                                                                                                                                                              |
| Maintenance                    | No maintenance (standard indoor applications)                                                                          |                                                                                                                        |                                                                                                                                                                                                              |
| Humidity Measurement           |                                                                                                                        |                                                                                                                        |                                                                                                                                                                                                              |
| Humidity sensor                | ROTRONIC HYGROMER® IN-1                                                                                                |                                                                                                                        |                                                                                                                                                                                                              |
| Measuring range                | 0...100 %rh                                                                                                            |                                                                                                                        |                                                                                                                                                                                                              |
| Accuracy at 23 °C ±5 K         | ±2 %rh (10...90 %rh), others ±5 %rh                                                                                    |                                                                                                                        |                                                                                                                                                                                                              |
| Resolution                     | 0.1 %rh                                                                                                                |                                                                                                                        |                                                                                                                                                                                                              |
| Adjustment points              | 35, 80 %rh                                                                                                             |                                                                                                                        |                                                                                                                                                                                                              |
| Response time τ <sub>0.3</sub> | <30 s, without filter                                                                                                  |                                                                                                                        |                                                                                                                                                                                                              |
| Long-term stability            | <1.5 %rh/year                                                                                                          |                                                                                                                        |                                                                                                                                                                                                              |
| Temperature Measurement        |                                                                                                                        |                                                                                                                        |                                                                                                                                                                                                              |
| Sensor                         | NTC thermistor                                                                                                         |                                                                                                                        |                                                                                                                                                                                                              |
| Measuring range                | -20...60 °C                                                                                                            |                                                                                                                        |                                                                                                                                                                                                              |
| Accuracy at 23 °C ±5 K         | ±0.3 K                                                                                                                 |                                                                                                                        |                                                                                                                                                                                                              |
| Resolution                     | 0.1 °C                                                                                                                 |                                                                                                                        |                                                                                                                                                                                                              |
| Response time                  | 4 s                                                                                                                    |                                                                                                                        |                                                                                                                                                                                                              |
| Software                       |                                                                                                                        |                                                                                                                        |                                                                                                                                                                                                              |
| HW4 (SW21)                     | Available as download at <a href="http://www.rotronic.com">www.rotronic.com</a>                                        |                                                                                                                        |                                                                                                                                                                                                              |
| Conformities / Housing         |                                                                                                                        |                                                                                                                        |                                                                                                                                                                                                              |
| CE / EMC compatibility         | EMC Directive 2014/30/EU, EN 61326-1:2012                                                                              |                                                                                                                        |                                                                                                                                                                                                              |
| Housing material               | ABS                                                                                                                    |                                                                                                                        |                                                                                                                                                                                                              |
| Dimensions                     | 330 x 250 x 50 mm                                                                                                      | 157 x 120 x 45 mm                                                                                                      | 76.7 x 41.8 x 233.9 mm                                                                                                                                                                                       |
| Weight                         | 1400 g                                                                                                                 | 200 g                                                                                                                  | 290 g                                                                                                                                                                                                        |

## Technical Information

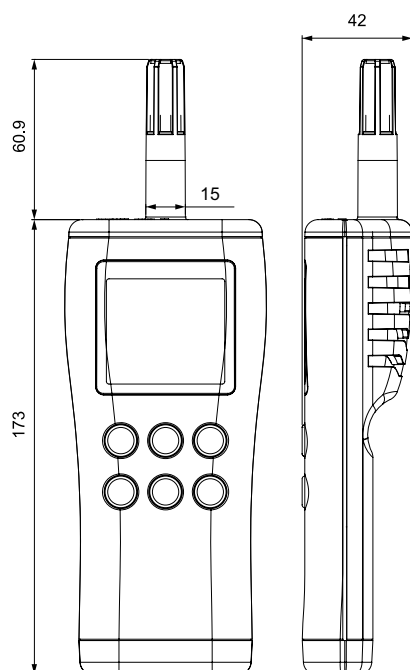
### Dimensions CO<sub>2</sub> Display



### Dimensions CL11



### Dimensions CP11



# Service van EURO-INDEX

**EURO-INDEX verleent service op alle meetinstrumenten uit haar leveringspakket en biedt de faciliteiten, kennis en hoog gekwalificeerd personeel voor (preventief) onderhoud, reparatie en kalibratie van uw meetinstrumenten.**

## Geautoriseerd Service Centrum

EURO-INDEX is van alle vertegenwoordigde merken een Geautoriseerd Service Centrum.

Dit betekent dat uw instrumenten worden behandeld door goed opgeleid en kundig personeel, dat beschikt over de juiste gereedschappen en software. Er worden uitsluitend originele onderdelen gebruikt en de garantie van uw instrument, evenals de certificering (ATEX, EN50379, etc.) blijven intact.

## Service- en kalibratielaboratorium

EURO-INDEX beschikt over een bijzonder modern service- en kalibratielaboratorium met RvA accreditatie naar NEN-EN-ISO/IEC 17025. Deze accreditatie geldt voor verschillende grootheden, zoals gespecificeerd in de scope bij accreditatienummer K105.



## KWS®

KWS is een uniek servicesysteem voor uw meetinstrumenten met periodiek onderhoud en kalibratie. Veel zaken worden voor u geregeld, zodat u zonder zorgen gebruik kunt maken van uw meetinstrumenten. De kosten zijn laag en voorspelbaar.

## Digitale toegang tot uw kalibratiecertificaten met Mijn KWS

Via het Mijn KWS webportal heeft u altijd en overal toegang tot uw kalibratiecertificaten en gerelateerde documenten.

## Verhuur van meetinstrumenten

- Uitgebreid assortiment
- Deskundig advies
- Instrumenten worden geleverd met accessoirepakket en herleidbaar kalibratiecertificaat

## EURO-INDEX Academy

- Producttrainingen (individueel en klassikaal)
- Seminars
- Demonstratie- en instructievideo's

**Bekijk de video op ons YouTube kanaal en ontdek alles over KWS**



Servicebalie



Kalibratie rookgasanalyse



Seminars en workshops



Kalibratie thermografie

Wijzigingen voorbehouden EURO-INDEX® VL 18001

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