PowerCEMS50

EFFICIENT CEMS SYSTEM FOR POWER PLANTS

Customized analyzer systems

SICK
Sensor Intelligence.

PowerCEMS50: CERTIFIED QUALITY – EASY INSTALLATION – EASY TO USE

PowerCEMS50 is the newest system in SICK's customized analyzer solution portfolio. The PowerCEMS50 is streamlined to exactly match the requirements of continuous emission monitoring. PowerCEMS50 is designed to continuously and reliably measure emissions from power generating facilities and that's exactly what it's been trimmed down to do.

Small footprint – easy to install, anywhere

The analyzer cabinet is less than 2 meters tall and 60 cm wide. This makes it easy to install PowerCEMS50 in existing analyzer shelters or anywhere indoors where space is available. The cabinet is made of rugged sheet steel with a protective paint coating and an enclosure rating of IP 54. If the ambient temperature gets above 35 °C, there is an option for air conditioning to prevent the electronics from overheating and to insure that the system works properly.

At the heart lies the SIDOR: manufactured by SICK

The extractive gas analyzer SIDOR measures 2 IR absorbing gases such as CO and NO as well as oxygen. The SIDOR has been approved for continuous emission monitoring in Europe according to EN 15267-3, has a maintenance interval of 3 months which means more time for on-line analysis and less downtime for adjustment and maintenance.

Multi-lingual – SIDOR is easy to communicate with

The extractive gas analyzer SIDOR has a clearly structured menu and built-in operator controls with selectable menu languages in German, English, French, Spanish, Dutch, Swedish Italian or Polish. That makes it easy to set up functions and control parameters according to local needs. And operators feel more comfortable when the analyzer speaks in their own language.

Keeping the sides free – gas and electrical connections are all through the top

In order to keep that small footprint, the gas lines including heated sample line, calibration gas and exhaust gas connections are all made at the top. Electrical connections: Power and output signal cables are also run through the top of the cabinet.
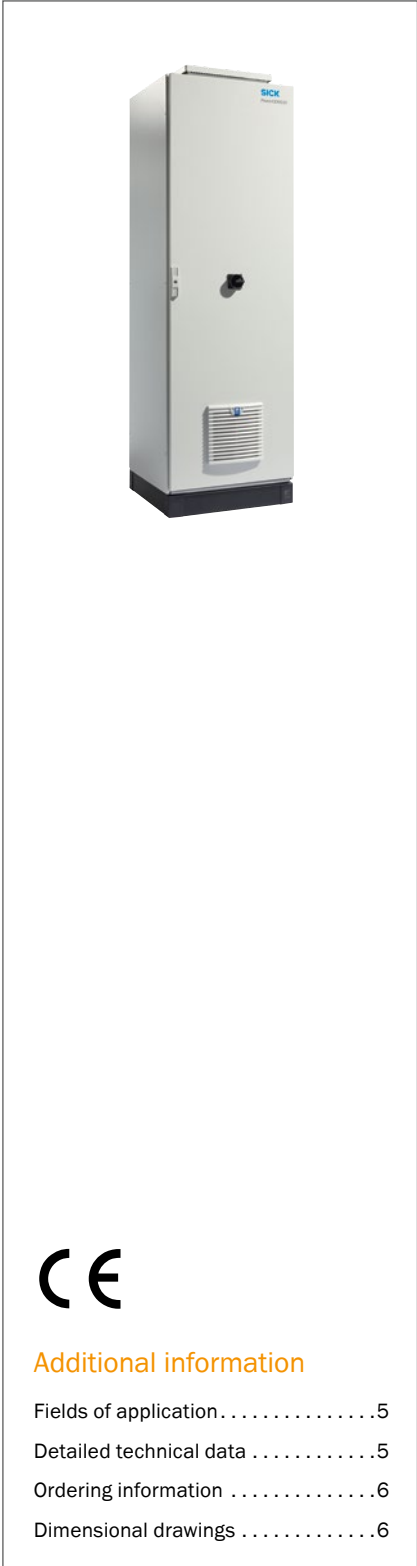

Analyzer and NO$_x$ converter are mounted on slide-out racks for easy removal or service.

In the PowerCEMS50 the gas wetted components are integrated together in the lower section of the cabinet. This insures that any condensate cannot drip onto electrical components preventing a dangerous and costly situation.

EFFICIENT CEMS SYSTEM FOR POWER PLANTS

Product description

The PowerCEMS50 analyzer system is a continuous emission monitoring system specifically designed to meet the emission monitoring requirements of fossil-fuel fired power stations. The basic system uses extractive analyzers coupled with a complete sample conditioning system to measure the typical gas components required for emission measurement including CO, NO_x, SO_2, and O_2. Through standardized design and construction, the PowerCEMS50 analyzer system is provided at an attractive price and with the superior quality of performance required for industrial use.

At a glance

- Basic system measures NO_x, CO and O_2
- Completely configured system with sampling, gas cooler and integrated gas pump.
- The system with its free-standing cabinet is suitable for ambient temperatures +5 ... +35 °C
- Measuring value outputs: analog (4 ... 20 mA) or digital (Modbus)
- The system is tested according to EN 61000-6 EMI and electrical safety, and is CE-certified

Your benefits

- High system availability through long maintenance intervals
- Dependable through superior performance
- Easy start-up and trouble-free installation
- Compact system design requires minimal installation space
- Competitively priced

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Additional information

➜ www.mysick.com/en/PowerCEMS50

For more information, just enter the link and get direct access to technical data, CAD design models, operating instructions, software, application examples and much more.

Fields of application

- Emission monitoring for coal, biomass[1], or gas fired power stations
- Single point CEMS measurement for combustion plants > 50 MW according to 2001/80/EG or 2010/75/EU (IED)

- Continuous emission monitoring for small boilers and biomass[1] plants < 50 MW

[1] Not suitable for emissions monitoring of contaminated biomass combustion according to Waste Incineration Directive

Detailed technical data

The exact device specifications and performance data of the product may deviate from the information provided here, and depend on the application in which the product is being used and the relevant customer specifications.
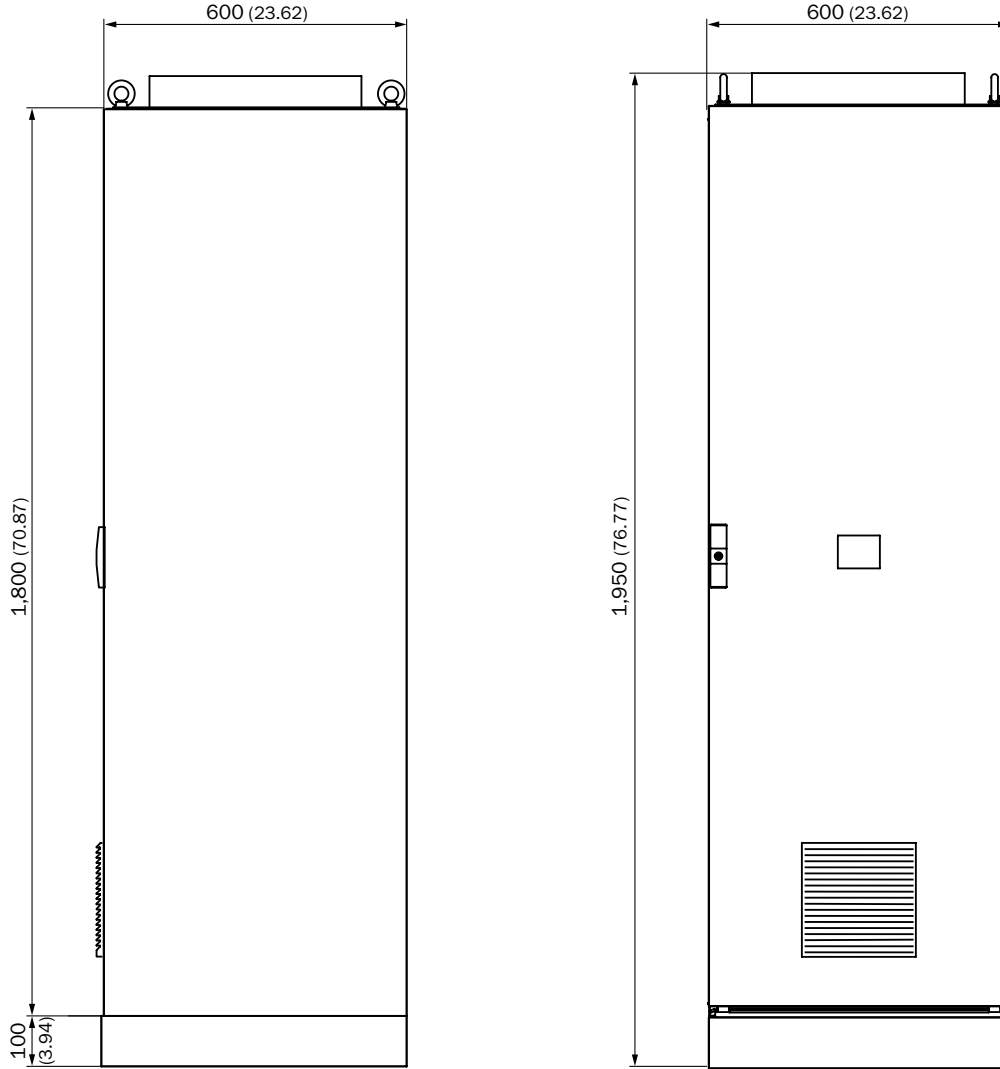
PowerCEMS50 system

Measured values	CO, NO_x, O_2, SO_2
Sample quantity	30 l/h ... 100 l/h
Process temperature	≤ +800 °C Depending on sampling probe
Sample temperature	Inlet analyzer system: ≤ +200 °C
Ambient temperature	+5 °C ... +35 °C With cooling device: +5 °C ... +50 °C Optional
Storage temperature	–20 °C ... +55 °C
Ambient humidity	≤ 75 % Relative humidity; non-condensing
Electrical safety	CE
Enclosure rating	IP 54
Analog outputs	4 outputs: 0/2/4 ... 20 mA, 500 Ω Electrically isolated
Analog inputs	2 inputs: 0/2/4 ... 20 mA Not electrically isolated
Digital outputs	8 NO: 48 V DC, 0.5 A / 34 V AC, 0.5 A
Digital inputs	8 inputs: 14 V / 42 V 1 digital input is available for customer use
Interfaces	RS-485 (option)
Bus protocol	Modbus
Model	Steel sheet cabinet
Dimensions (W x H x D)	600 mm x 1,950 mm x 600 mm
Weight	≤ 200 kg
Mounting	Under roofing or other protection against exposure to direct heat radiation, high dust loads and corrosive atmospheres
Electrical connection	
Voltage	230 V
Frequency	50 Hz
Power consumption	≤ 1,500 W

Ordering information

Our regional sales organization will help you to select the optimum device configuration.
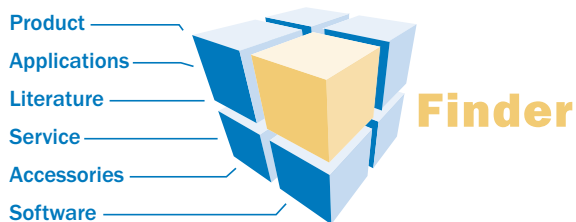
Dimensional drawings (Dimensions in mm (inch))

PowerCEMS50 system

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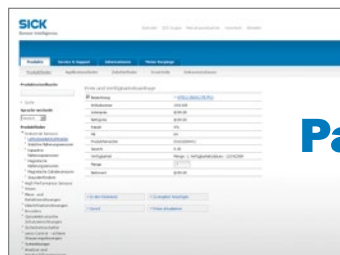Service
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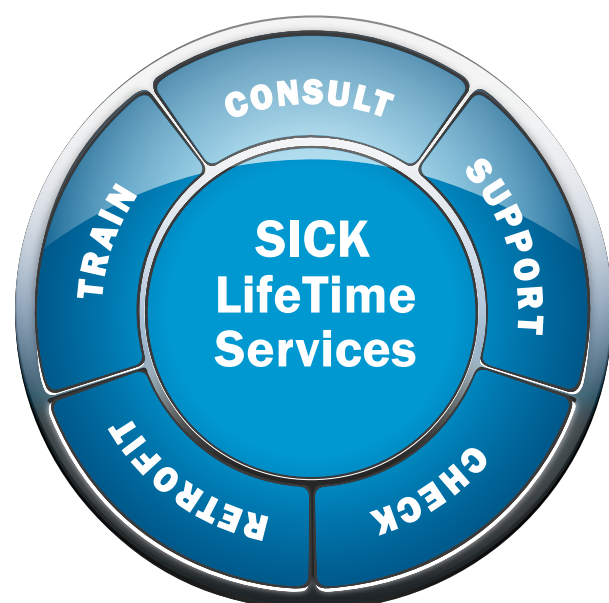
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CHECK
RETROFIT

SICK LifeTime Services

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Verification & Optimization
Checks and recommendations for increased availability

Upgrade & Retrofits
Uncovers new potential for machines and systems

Training & Education
Employee qualification for increased competitiveness

SICK AT A GLANCE

SICK is a leading manufacturer of intelligent sensors and sensor solutions for factory, logistics, and process automation. With more than 6,000 employees and over 40 subsidiaries worldwide, we are always close to our customers. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in various industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services round out our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

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Please find detailed addresses and additional representatives and agencies in all major industrial nations at: **www.sick.com**

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