

SS2100i gas analyzers

Exceptionally reliable for measuring trace gas components



More information and current pricing:

www.de.endress.com/SS2100I

Benefits:

- Accurate, real-time measurements not hampered by wet-up (absorption) or dry-down (desorption)
- Virtually maintenance free and reliable in harsh environments
- Dependable with greater repeatability than surface-based sensors with NIST-traceable calibration
- Analog and serial outputs for remote monitoring
- Low cost of ownership, no consumables
- Available for the following measurements: H₂O, CO₂, H₂S, NH₃, C₂H₂
- ATEX/IECEX Zone 1 certified

Specs at a glance

- **Measured Variables** Concentration Cell Pressure Cell
Temperature
- **Hazardous area approvals** IECEx / ATEX / CNEEx / KC / CCOE / CML Zone 1

Field of application: SS2100i gas analyzers accurately measure trace gas components (H₂O, CO₂, H₂S, NH₃, and C₂H₂) using tunable diode laser absorption spectroscopy (TDLAS) technology. The analyzers require little maintenance and do not need recalibration or periodic replacement parts. SS2100i gas analyzers are certified for ATEX/IECEX Zone 1.

Features and specifications

H₂S

Measuring principle

TDLAS

H2S

Product Headline

An advanced gas analyzer for hydrogen sulfide (H2S) measurement. The SS2100i uses Tunable Laser Diode Absorption Spectroscopy (TDLAS) to determine the concentration of the analyte without coming into physical contact with the stream.

Channels

1

Analyte and Measurement ranges

H2S (Hydrogen Sulfide): 0-10 to 0-1000 ppmv; 0-5000 ppmv to 0-5%

Measured Variables

Concentration
Cell Pressure
Cell Temperature

Ambient Temperature range

-20 to 50°C (-4 to 122°F)

Optional (i-2 only): -10 to 60°C (14 to 140°F)

Operating Pressure range

Inlet Pressure: 140-350 kPa (20-50 psig)

Sample Cell: 800-1200 mbara or 950-1700 mbara (optional)

Analyzer Wetted materials

316L Stainless Steel
FKM O-Rings
Glass

Power supply

120 or 240 VAC \pm 10%, 50-60 Hz; 300W

H2S**Communication**

Analog Output: Two 4-20mA Isolated, 1200 ohms @ 24 VDC max load (measurement value)

Analog Input: One 4-20mA Isolated, 1200 ohms @ 24 VDC max load (process pressure)

Serial: RS232C and Ethernet

Protocol: Modbus Gould RTU or Daniel RTU or ASCII

Digital Outputs: 5, Concentration Alarm, General Fault, Validation Fail, Validation 1 Active, Validation 2 Active

Digital Inputs: 2, Flow Alarm, Validation Request

Housing materials

Electronics: Copper-free Aluminum

Laser/Cell Enclosure: Copper-free Aluminum (i-2 only)

Sample System Enclosure: 304 or 316 Stainless Steel

Hazardous area approvals

IECEX / ATEX / CNEC / KC / CCOE / CML Zone 1

Degree of protection

IP66

Product safety

CE

Metrological approvals

PAC China, Kazakhstan (i-1 only)

H2O**Measuring principle**

TDLAS

Product Headline

An advanced gas analyzer for moisture (H2O) measurement. The SS2100i uses Tunable Laser Diode Absorption Spectroscopy (TDLAS) to determine the concentration of the analyte without coming into physical contact with the stream.

H2O

Channels

1

Analyte and Measurement ranges

H2O (Moisture): 0-10 to 0-100 ppmv; 0-50 to 0-5000 ppmv

Measured Variables

Concentration
Moisture Dew Point
Cell Pressure
Cell Temperature

Ambient Temperature range

-20 to 50°C (-4 to 122°F)
Optional (i-2 only): -10 to 60°C (14 to 140°F)

Operating Pressure range

Inlet Pressure: 140-350 kPa (20-50 psig)
Sample Cell: 800-1200 mbara or 950-1700 mbara (optional)

Analyzer Wetted materials

316L Stainless Steel
FKM O-Rings
Glass

Power supply120 or 240 VAC $\pm 10\%$, 50-60 Hz; 300W**Communication**

Analog Output: Two 4-20mA Isolated, 1200 ohms @ 24 VDC max load (measurement value)
Analog Input: One 4-20mA Isolated, 1200 ohms @ 24 VDC max load (process pressure)
Serial: RS232C and Ethernet
Protocol: Modbus Gould RTU or Daniel RTU or ASCII
Digital Outputs: 5, Concentration Alarm, General Fault, Validation Fail, Validation 1 Active, Validation 2 Active
Digital Inputs: 2, Flow Alarm, Validation Request

H2O

Housing materials

Electronics: Copper-free Aluminum

Laser/Cell Enclosure: Copper-free Aluminum (i-2 only)

Sample System Enclosure: 304 or 316 Stainless Steel

Hazardous area approvals

IECEX / ATEX / CNEx / KC / CCOE / CML Zone 1

Degree of protection

IP66

Product safety

CE

Metrological approvals

PAC China, Kazakhstan (i-1 only)

CO2

Measuring principle

TDLAS

Product Headline

An advanced gas analyzer for carbon dioxide (CO2) measurement. The SS2100i uses Tunable Laser Diode Absorption Spectroscopy (TDLAS) to determine the concentration of the analyte without coming into physical contact with the stream.

Channels

1

Analyte and Measurement ranges

CO2 (Carbon Dioxide): 0-10 to 0-1000 ppmv; 0-5000 ppmv to 0-5%

Measured Variables

Concentration

Cell Pressure

Cell Temperature

CO2

Ambient Temperature range

-20 to 50°C (-4 to 122°F)

Optional (i-2 only): -10 to 60°C (14 to 140°F)

Operating Pressure range

Inlet Pressure: 140-350 kPa (20-50 psig)

Sample Cell: 800-1200 mbara or 950-1700 mbara (optional)

Analyzer Wetted materials

316L Stainless Steel

FKM O-Rings

Glass

Power supply

120 or 240 VAC \pm 10%, 50-60 Hz; 300W

Communication

Analog Output: Two 4-20mA Isolated, 1200 ohms @ 24 VDC max load (measurement value)

Analog Input: One 4-20mA Isolated, 1200 ohms @ 24 VDC max load (process pressure)

Serial: RS232C and Ethernet

Protocol: Modbus Gould RTU or Daniel RTU or ASCII

Digital Outputs: 5, Concentration Alarm, General Fault, Validation Fail, Validation 1 Active, Validation 2 Active

Digital Inputs: 2, Flow Alarm, Validation Request

Housing materials

Electronics: Copper-free Aluminum

Laser/Cell Enclosure: Copper-free Aluminum (i-2 only)

Sample System Enclosure: 304 or 316 Stainless Steel

Hazardous area approvals

IECEX / ATEX / CNEx / KC / CCOE / CML Zone 1

Degree of protection

IP66

CO₂**Product safety**

CE

Metrological approvals

PAC China, Kazakhstan (i-1 only)

NH₃**Measuring principle**

TDLAS

Product Headline

An advanced gas analyzer for ammonia (NH₃) measurement. The SS2100i uses Tunable Laser Diode Absorption Spectroscopy (TDLAS) to determine the concentration of the analyte without coming into physical contact with the stream.

Channels

1

Analyte and Measurement rangesNH₃ (Ammonia): 0-5 ppmv**Measured Variables**

Concentration

Cell Pressure

Cell Temperature

Ambient Temperature range

-20 to 50°C (-4 to 122°F)

Optional (i-2 only): -10 to 60°C (14 to 140°F)

Operating Pressure range

Inlet Pressure: 140-350 kPa (20-50 psig)

Sample Cell: 800-1200 mbara or 950-1700 mbara (optional)

NH3

Analyzer Wetted materials

316L Stainless Steel
FKM O-Rings
Glass

Power supply

120 or 240 VAC \pm 10%, 50-60 Hz; 300W

Communication

Analog Output: Two 4-20mA Isolated, 1200 ohms @ 24 VDC max load (measurement value)
Analog Input: One 4-20mA Isolated, 1200 ohms @ 24 VDC max load (process pressure)
Serial: RS232C and Ethernet
Protocol: Modbus Gould RTU or Daniel RTU or ASCII
Digital Outputs: 5, Concentration Alarm, General Fault, Validation Fail, Validation 1 Active, Validation 2 Active
Digital Inputs: 2, Flow Alarm, Validation Request

Housing materials

Electronics: Copper-free Aluminum
Laser/Cell Enclosure: Copper-free Aluminum (i-2 only)
Sample System Enclosure: 304 or 316 Stainless Steel

Hazardous area approvals

IECEX / ATEX / CNEx / KC / CCOE / CML Zone 1

Degree of protection

IP66

Product safety

CE

Metrological approvals

PAC China, Kazakhstan (i-1 only)

C2H2**Measuring principle**

TDLAS

Product Headline

An advanced gas analyzer for acetylene (C2H2) measurement. The SS2100i uses Tunable Laser Diode Absorption Spectroscopy (TDLAS) to determine the concentration of the analyte without coming into physical contact with the stream.

Channels

1

Analyte and Measurement ranges

C2H2 (Acetylene): 0-5; 0-3000 ppmv

Measured Variables

Concentration

Cell Pressure

Cell Temperature

Ambient Temperature range

-20 to 50°C (-4 to 122°F)

Optional (i-2 only): -10 to 60°C (14 to 140°F)

Operating Pressure range

Inlet Pressure: 140-350 kPa (20-50 psig)

Sample Cell: 800-1200 mbara or 950-1700 mbara (optional)

Analyzer Wetted materials

316L Stainless Steel

FKM O-Rings

Glass

Power supply

120 or 240 VAC ±10%, 50-60 Hz; 300W

C2H2**Communication**

Analog Output: Two 4-20mA Isolated, 1200 ohms @ 24 VDC max load (measurement value)

Analog Input: One 4-20mA Isolated, 1200 ohms @ 24 VDC max load (process pressure)

Serial: RS232C and Ethernet

Protocol: Modbus Gould RTU or Daniel RTU or ASCII

Digital Outputs: 5, Concentration Alarm, General Fault, Validation Fail, Validation 1 Active, Validation 2 Active

Digital Inputs: 2, Flow Alarm, Validation Request

Housing materials

Electronics: Copper-free Aluminum

Laser/Cell Enclosure: Copper-free Aluminum (i-2 only)

Sample System Enclosure: 304 or 316 Stainless Steel

Hazardous area approvals

IECEX / ATEX / CNEC / KC / CCOE / CML Zone 1

Degree of protection

IP66

Product safety

CE

Metrological approvals

PAC China, Kazakhstan (i-1 only)

More information www.de.endress.com/SS2100I