AIEQS
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Process Devlopment

NDIR GAS ANALYZER

GA9271

2026 NEW

CO, CO_2, CH_4, C_3H_8, H_2O, O_2 NO, SO_2, H_2

19” Rack Mount

Highlights:

- multi-channel measuring NDIR sensor for up to 6 gases
- Paramagnetic and electro chemical cells connectable for (O2, NO)
- no moving parts for zero abrasion and wear
- temperature and pressure compensation, reference channel for maximum precision
- energy saving & combustion control
- temperature control of burners and heaters
- process control and quality control
- explosion risk control
- reduce emission

ویژگیها :

- اندازه گیری همزمان تا ۶ گاز بروش مادون قرمز
- استفاده از متدهای پارامگنتیک و الکتروشیمیایی جهت گاز های O2,NO
- بدون موتور چاپر و قطعه متحرک
- دارای تصحیح فشار و دما برای مقادیر اندازه گیری
- بهینه سازی فرآیند احتراق و صرفه جویی در مصرف انرژی
- جلوگیری از افت دمایی کوره ها
- کنترل فرآیند و بهبود کیفیت تولید
- جلوگیری از انباشت گاز در زمان راه اندازی و کنترل خطر انفجار آن
- کاهش انتشار آلاینده های زیست محیطی

Product Details:

Gas	min. range	max. range	Type of Sensor
CO	0 – 5000 ppm	0 – 50 Vol%	NDIR[1]
CO2	0 – 100 ppm	0 – 100 Vol%	NDIR
CH4	0 – 5 Vol%	0 – 100 Vol%	NDIR
C3H8	0 – 10000 ppm	0 – 50 Vol%	NDIR
SO2		0 – 2000 ppm	NDIR
NO		0 – 5000 ppm	NDIR
H2O	0 – 100 % rel. / 0 – 6 % abs.		NDIR
O2	0 – 5 Vol%	0 – 100 Vol%	Paramagnetic[2]
		0 – 25 Vol%	EC[3]
NO		0 – 5000 ppm	EC
H2		0-100 Vol%	TCD[4]

Notes:

1. None Dispersive Infra-Red method
2. Paramagnetic measuring cell
3. Electrochemical
4. Thermal Conductivity Detector
5. Life time 1-2 years depends on sample condition and concentration

کاربردها :

- نصب در سیستم های آنالایزر برخط گاز در صنایع سیمان و فولاد
- پایش گازهای فرآیندی در دهانه کوره دوار
- بهینه سازی احتراق ثانویه در کلساینر
- پایش فرآیند و محافظت از فیلتر الکتروستاتیکی در پیش گرم کن
- کنترل فرآیند کارخانجات احیا مستقیم آهن
- اندازه گیری گاز در صنعت متالوژی و کنترل کیفیت محصول نهایی فولادی (نورد، قطعه سازی ، عملیات حرارتی)

Applications:

- Suitable to install in gas analyzer system of Cement, Steel plants
- Kiln inlet combustion control
- Calcination combustion control
- Prevent explosion of Electrostatic filters
- Process control DRI steel plans
- Metallurgy gas measurements (heat treatments of parts by gas)
- Any other application by request

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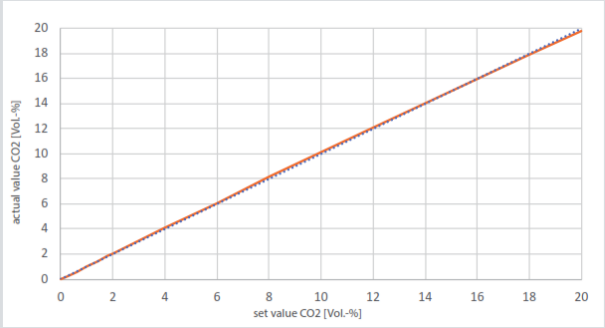
Technical Information for GA92 V1

1 Technical Data of NDIR sensor

Measuring principle	non-dispersive infrared (NDIR)
max. NDIR channels	6
digital resolution	1 ppm
Linearity	± 0.1 % of MR
accuracy	± 2.0 % of MR
Zero-point drift	± 2.0 % of MR / 24 h
sensitivity drift	± 2.0 % of MR / week
pressure influence	± 0.1 % of MR / hPa
temp. influence	± 0.1 % of MR / K
ripple	± 0.1 % of MR
response time	T90 < 4 s

warm-up time	20 s quick start < 10 min full specification
dimensions	320 x 111 x 60 mm (L x W x H)
mass	0.8 kg
power supply	+ 15 V DC ... 25 V DC 150 mA @ 24 V DC
communication	RS232
analog output	0 ... 24 mA 4 ... 24 mA
Operating temp.	5 ... 45 °C
operating pressure	760 ... 1160 hPa
gas flow	20 ... 100 l/h max. flow difference ± 2 l/h
permissible gas pressure	20 ... 200 hPa gauge pressure
warm-up time	20 s quick start < 10 min full specification

NDIR 8000 sensor



Linearity of NDIR8000 V172

Measuring ganges:

CO2 0 - 1,000 vppm

CO2 0 - 20,000 vppm

CO2 0 - 20 Vol.-%

dynamic range switching

R^2=0.9998

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2 Technical Data of Other Sensors

TCD

optional

TCD Gas Sensor
TCD sensor for H2 Measuring

Range
0-100 Vol%
Can be customized on Request

Manufacturer
Cubic Instruments (Wuhan) Ltd.

Para. M

optional

Paramagnetic Sensor Oxygen Measuring (PAROX 1200)

Range
0-100 Vol%, 0-25 Vol%, other ranges on request

min Range
0-50 % O2

Repeatability
< ± 0,03 % O2

Manufacturer
Angst + Pfister

EC

optional

Oxygen Measuring Range
O2: 0 – 25 Vol%

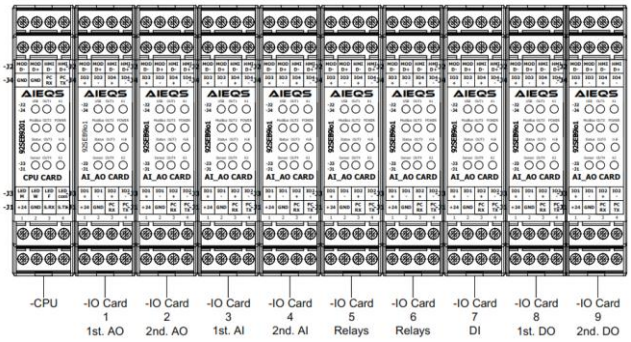
NO Measuring Range
0 – 5000 ppm

NO Measuring Range
0 – 5000 ppm

Sensor life time
1-2 years depends on sample condition

Manufacturer
SAXON JUNKALOR GmbH

3 Power & I/O card Details



Standard Cards
-X2: 1st mA out card
-X10: mainboard card
-X11: Modbus RS 485 and USB output

optional cards as order
-X3: 2nd mA out card
-X4: mA IN card
-X5: 1st Relay out card
-X6: 2nd Relay out card
-X7: opto-coupler IN
-X8: opto-coupler out
-X9: optional pump control

4…20 mA output
4 channels mA output 4 … 20 mA, 500 Ω
Potential-free (electrically isolated)
Signal range: 0 … 24 mA
Resolution/precision: 0.1 % (20 µA)

4…20 mA input
2 channels mA input 4 … 20 mA
Potential-free (electrically isolated)
Highest allowable input signal 30 mA
Overload protection ±1000 mA
Input load 50 Ω

Gas connection
Swagelok 6 mm
Swagelok ¼"

Opto-coupler input
8 Opto-coupler input
Switching range: 14 … 42 V
Highest allowable voltage: ±50 V DC

Opto-coupler output
8 Opto-coupler input
Switching range: 14 … 42 V
Highest allowable voltage: ±50 V DC

19" Rack mount enclosure Dimension
۴۲۰x ۴۲۰ x ۱۷۰ mm, 4 unit of rack

19" Rack mount enclosure weight
15-25 Kg

Relay output
8 relay outputs: 30 V AC/48 V DC
0,5 A; 1-pole changeover switch
3 connections
Max. switching current: 30 W (at 48 V DC/500 mA)

Supply Voltage
90 to 260 VAC (+10 %, –15 %), switchable, 48 ... 62 Hz

Ambient temperature
+5 ... +45 °C

Storage temperature
–20 ...+70 °C

interface
RS-485 for Modbus
RS232 USB

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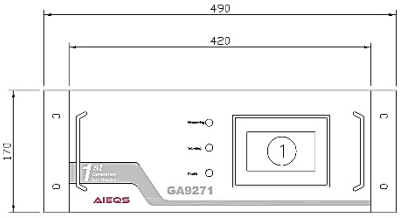
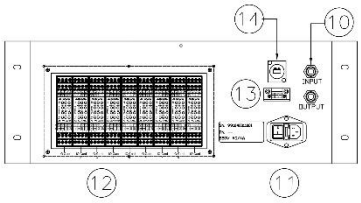
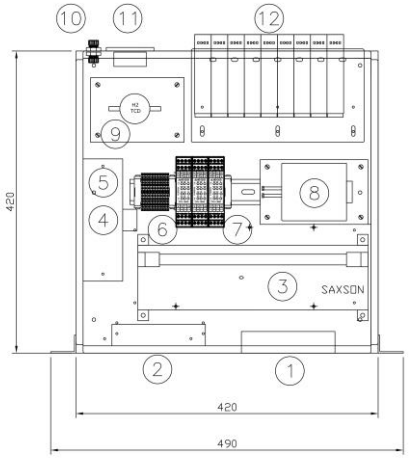
4 Dimensions



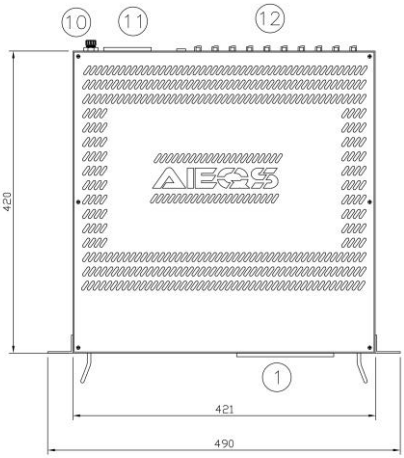
FRONT VIEW



BACK VIEW



INSIDE VIEW



TOP VIEW

1	Touch screen Display and LEDs for Status
2	Power Supply
3	NDIR sensor NDIR 8000
4	Electrochemical sensors (optional)
5	Auto Zero
6	Terminals
7	CPU Cards
8	Paramagnetic sensor(optional)
9	TCD Sensor (Optional)
10	Gas inlet / outlet connections
11	Power Cable & Fuse
12	I/O cards Block
13	Signal socket
14	USB connection