XGA301
Industrial Gas Analyzer

The XGA301 Industrial Gas Analyzer from Michell Instruments provides a convenient platform to measure oxygen, dew point, CO_2 and CH_4. The analyzer can be supplied in one of two bench-mounted chassis and with up to three sensors fitted.

Highlights

- Sensor choices from zirconia, galvanic electrochemical, infrared and ceramic impedance technologies

- Variable speed pump (optional)

- Intuitive HMI with back-lit display

- Two fully programmable alarms

- 2 x voltage outputs and 2 x 4–20 mA outputs

- Digital RS232 output

- Software package includes live graphing and Excel™ compatible data-logging

- Password protection

- Panel mounting bezel for XGA301A1 variant

Applications

- Convection reflow oven control

- Laboratory scale experiments

- Food production (nitrogen blanketed)

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Technical Specifications

Monitor

Operating temperature	+5 to +35 °C
Warm-up time	3 to 4 minutes @ +20 °C
Maximum inlet temperature	+50 °C
Sample flow rate	0 to 1.2 Nl/min, user-selectable with pump
Maximum inlet pressure	1 barg
Display	
XGA301A1/A2:	16 x 2 character (9 mm) back-lit LCD,
XGA301A3:	20 x 4 character (9 mm) back-lit LCD
Sample connections	
Standard:	4 mm ID / 6 mm OD nipple — gas fittings on front panel
Optional:	Rectus™ or Swagelok® 6 mm fittings. Rear panel fittings for XGA301A1 only
Dimensions (H x W x D)	
XGA301A1:	290 x 250 x 250 mm
Panel-mount XGA301:	4U (178) x 300 x 290 mm
XGA301A2/A3:	195 x 355 x 340 mm*
Weight	
XGA301A1:	3.5 kg
XGA301A2/A3:	4 to 5.5 kg

Electrical Specifications

Analog Outputs	2 x 4–20 mA outputs, assignable to any of the fitted sensors. 2 x alarm relays 2 x 0–10 V (XGA301A1 only) 2 x 0–5 V (XGA301A2/A3 only)
Digital output	RS232 ASCII
Power supply	90–260 V AC, 50/60 Hz

Moisture and Pressure Sensors

Sensor Type	Water Dew Point**	Pressure (2m lead), remote sensor
Accuracy	±2 °Cdp of reading	<±0.25% of full scale standard, enhanced accuracy of 0.1% and 0.05% available at extra cost
Ranges	-65 to +20 °Cdp -100 to +20 °Cdp	0–5 barg 0–10 barg

* Maximum dimensions including needle valve and with the feet extended

** For full specifications, see the Easidew Transmitter datasheet

Sensor Options and Specifications

Sensor Type	Zirconia	Electrochemical			Infrared	
Measurand	O_2	O_2	O_2 (Low range)	H_2 present	CO_2	CH_4
Accuracy	±1% of reading (logarithmic scale) or 0.5 ppm whichever is greater.	±1% of full scale at 25 °C 1013 mbar	±2% of full scale at 25 °C 1013 mbar		±2% of full scale at 25 °C 1013 mbar	
Inlet Pressure	1 barg max	0.7 – 1.4 bara			0.7 – 1.4 bara	
Response Time	Approx 5 seconds for a 90% step change (gas flow rate of 1 Nl/min-1)	Approximately 30 seconds (T90)			Approximately 30 seconds (T90)	
Stablility	±2% of reading per month				±2% of range (over 12 months)	
Life Expectancy	>17,500 hours	Up to 5 years in normal usage (O_2 < 1,000 ppm for low range sensor)			~10 yrs	
0–100%					✓	✓
0–30%	✓ Output can be user configured 0–10 ppm, up to 0–30%	✓			✓	✓
0–10%					✓	✓
0–5%					✓	✓
0–3%					✓	
0–1%			✓		✓	
0–5000ppm					✓	✓
0–2000ppm				✓	✓	
0–1000ppm				✓	✓	
0–500ppm				✓	✓	

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