XGA301
Industrial Gas Analyzer

The XGA301 Industrial Gas Analyzer from Michell Instruments provides a convenient platform to measure oxygen, dew point and other gases such as CO_2, CO 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
- Combustion process in lean-burn applications — e.g. engine performance testing
- Industrial processes — e.g. wave soldering and vacuum welding
- Glove boxes
- 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: XGA301A3:	 16 x 2 character (9mm) back-lit LCD, 20 x 4 character (9mm) back-lit LCD
Sample connections Standard: Optional:	 4mm ID / 6mm OD nipple — gas fittings on front panel Rectus™ or Swagelok® 6mm fittings. Rear panel fittings for XGA301A1 only
Dimensions (H x W x D) XGA301A1: Panel-mount XGA301: XGA301A2/A3:	 290 x 250 x 250mm (11.4 x 9.8 x 9.8") 4U (177) x 300 x 290mm 195 x 355 x 340mm (13.8 x 10.4 x 5.9").*
Weight XGA301A1: XGA301A2/A3:	 3.5kg 4 to 5.5kg

Electrical Specifications

Analog Outputs	2x 4-20mA outputs, assignable to any of the fitted sensors. 2x 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)	CO	CO (H_2 present)	CO_2	CH_4	CO
Accuracy	±1% of reading (logarithmic scale) or 0.5ppm whichever is greater.	±1% of full scale at 25°C 1013mbar	±2% of full scale at 25°C 1013mbar			±2% of full scale at 25°C 1013mbar		
Inlet Pressure	1barg max	0.7 – 1.4bara				0.7 – 1.4bara		
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	~10yrs				~10yrs		
0-100%						✓	✓	✓
0-30%	✓ Output can be user configured 0-10ppm, up to 0-30%	✓				✓	✓	✓
0-10%						✓	✓	✓
0-5%						✓	✓	
0-3%						✓		✓
0-1%			✓			✓		
0-5000ppm				✓		✓	✓	
0-2000ppm				✓	✓	✓		✓
0-1000ppm				✓	✓	✓		
0-500ppm				✓	✓	✓		

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