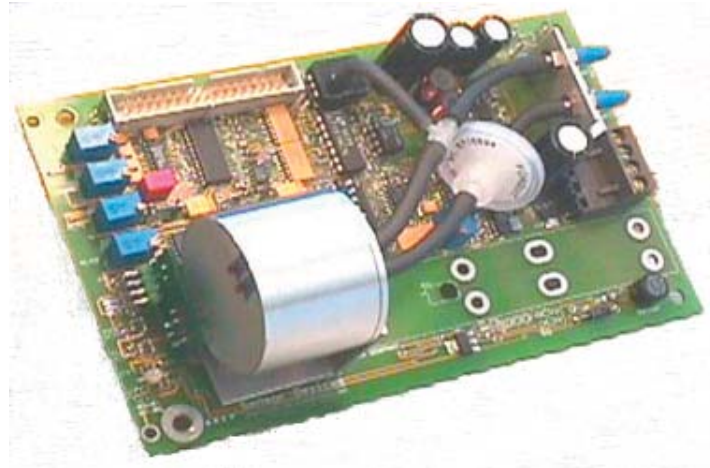
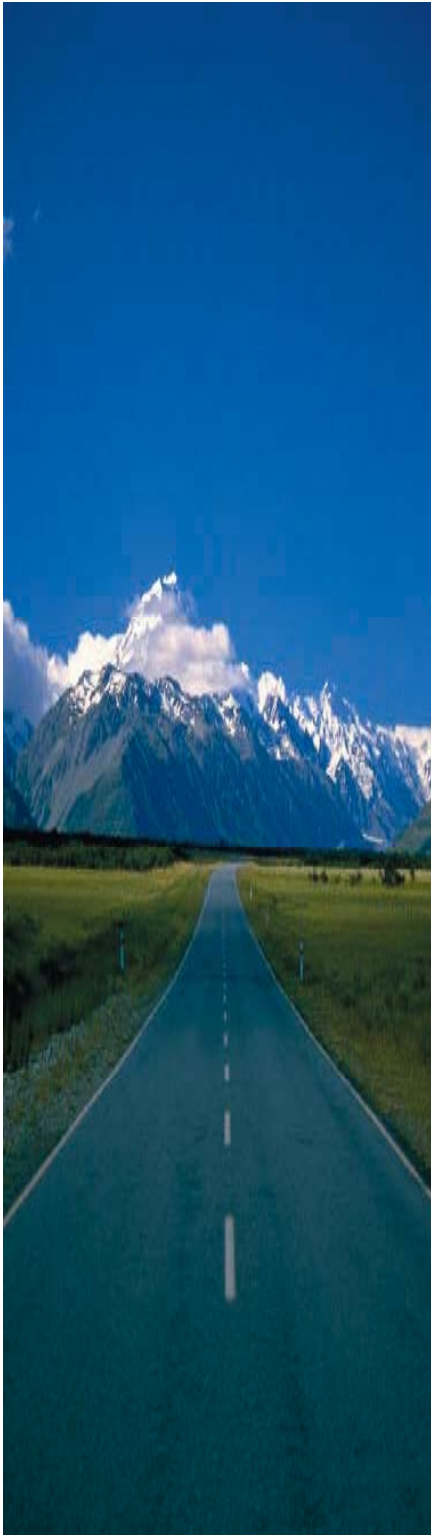


AGM 22

Thermal Conductivity Gas Transmitters for Detection of H₂, He, Xe and Other Gases



The Advanced Gasmitter® represents the latest technological achievement in thermal conductivity (TC-) gas transducers for industrial applications. High accuracy, good long-term stability, excellent repeatability and flexible performance criteria facilitate its integration for the system developer.

The micro-mechanical sensor element is manufactured to exact specifications using state-of-the-art technology. Substrate quality is maintained by rigorous process and quality control standards. The software engine performs calculation and compensation procedures to ensure reliability and highly repeatable performance. The embedded temperature-control, advanced signal-processing, and optional pressure compensation algorithms allow OEM system developers to achieve performance levels specified in more expensive, high-end gas analyzers. Various standard sensor elements are available to adapt the Advanced Gasmitter® to specific customer requirements.

Enhanced flexibility make the Advanced Gasmitter® an ideal choice for variety of gas measurement products. Configuration options allow measurement of single gas components or specific gas mixtures from 0-5% to 0-100% by volume with high resolution and low signal-to-noise ratio.

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PRODUCT SPECIFICATIONS:

Measuring Principle:	Thermal conductivity detection principle with silicon micro-mechanics
Measuring Ranges:	Only binary or pseudo-binary gas mixtures. H ₂ in N ₂ (or air)/He in N ₂ (or air)/Xe in N ₂ (or air)/He in Ar: 0-5%, 0-10%, 0-20%, 0-30%, 0-50%, 0-80%, 0-100%, other ranges on request
Mechanical Dimensions:	PCB 160 x 100mm, Height 60mm
Weight:	max. 800g
Tube Connection:	3mm ID

PERFORMANCE:

Response Time:	1...45s, depending on used sensor element, flow, tube length, digital time constant
Accuracy:	± 2% FS
Stability:	± 2% FS over 12 months
Repeatability:	± 0.2% at zero, ± 1% at span
Lower Detection Limit:	< 1% FS
Linearity Error:	< 2% FS
Temperature Dependence:	± 1% FS/10° Kelvin at zero, ± 2% FS/10° Kelvin at span
Temp. Controlled Heater:	55°C ± 5°C (optional)
Pressure Dependence:	0% at zero, < 2% FS/10mbar at span (non compensated)
Pressure Compensation:	< 0.2% FS/10mbar at span (compensated between 800...1200mbar), optional
Status/Failure Output:	+5V HCMOS on 34-Pin connector

COMMUNICATION:

Analog Output Signals:	Selectable 0-20mA, 4-20mA, 0-1VDC, 0-5VDC, 0-10VDC, 10 Bit resolution, linearized
Digital Output Signal:	RS232C interface (V.28/V.24); linearized, 12 Bit resolution
Digital Time Constant:	0.5s, 5s, 10s, 20s, DIP switch selectable

OPERATION:

Supply Voltage:	24VDC (18-30VDC), 24VDC (24-30VDC) with heater option
Average Power Consumption:	Max 3W without heater option, Max 8W with heater option, during warm-up 28W over 3 minutes
Load at Current Output:	Typ. 250Ω, max. 500Ω
Temperature Range:	0...+50°C
Storage Temperature:	-20...+60°C
Flow Range:	0...750ml/min
Humidity Range:	0...95%RH non condensing
Ready Status:	10s operation, 30min full specifications
Alarm Settings:	Two adjustable alarms (Potentiometer), output signal +5V HCMOS signal (<u>no</u> relay output)
Calibration:	Zero and span point with potentiometers

DISCLAIMER: Specifications are subject to change without notice. While due caution has been exercised in the production of this document, possible errors and omissions are unintentional.