

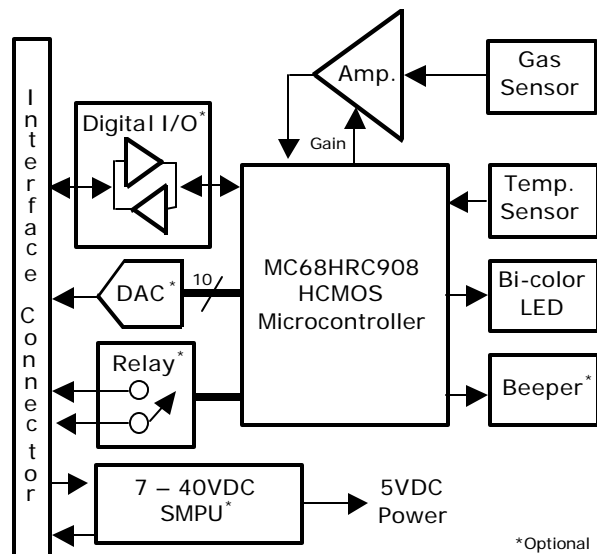
Intelligent MOS Sensor Gas Detectors

DESCRIPTION

Panterra-MOS is a series of low cost gas detectors based on MOS sensor technology. These sensors are intended for environmental monitoring and ambient safety applications.

TARGET GASES

Hydrogen
Methane



SPECIFICATIONS (Preliminary and Tentative)

Target Gas	Chem	Range	Typ. Resol.	Typ. Accuracy	T90	Temp.
Hydrogen (trace)	H ₂	1,000 ppm	1-10 ppm	+/- 5-25 ppm	4s	0-50
Methane (trace)	CH ₄	1,000 ppm	1-10 ppm	+/- 5-25 ppm	4s	0-50

Note: All sensors rated for atmospheric pressure +/- 20%, 10-95% R.H. (non-condensing), 10-30% vol. oxygen
 Operating temperatures specified in degrees Celsius.
 Accuracies specified as total repeatability and linearity error.
 30 second warm-up time required.
 Trace gas sensing accuracy based on recent zeroing.

Panterra-MOS Gas Detectors

STANDARD FEATURES

Supported states:	Normal, Warning, Alarm, Error
Visual indication:	Bi-color (red/green) LED
Audio indication:	80dB at 30cm beeper (optional)
Relay:	<ul style="list-style-type: none">- 100 VA sealed SPST- NO or NC- Auto reset or manual reset (latching)
Sensor sampling system:	10-bit A/D with auto-ranging analog front end
Temperature compensation:	Active compensation over entire operating range
Output signaling (one of):	
0-5VDC:	8 or 10-bit DAC (optional)
TTL:	Normally high/low – Auto/Latching (optional)
Step function:	Voltage encoded Normal, Warning, Alarm, Error (optional)
Digital communications:	PK-Port™ compliant signaling for calibration and monitoring
Input power:	
I1:	5VDC regulated
I2:	7-40VDC unregulated
I3:	7-60VDC unregulated
Mechanical:	<ul style="list-style-type: none">- 2.5" x 2.0" x 1.0" form factor- Anodized aluminum enclosure optional- Extendable sensor: 25' cable, 1" x 1" x 1" sensor head
General:	<ul style="list-style-type: none">- User-settable alarm/warning via <i>PK-Port™</i>- Digital FLASH-based calibration- Each device factory pre-calibrated- Field re-programmable firmware

SPECIAL FEATURES

Error detection:	<ul style="list-style-type: none">- Sensor failure (not available in CO models)- Temperature error- Overexposure detection (Hydrogen models)- Error signaled as alarm or error state
Power consumption:	~500mW
Sensor lifetime:	~5 years; 2 year warranty

ORDERING OPTIONS

Target gas:	Hydrogen or methane
Action levels:	Warning and alarm concentration as percentage of range
Output signal type:	None, 0-5VDC, TTL – norm. hi/lo – auto/latch, step function
Relay type:	None, norm. open/closed – auto/latch
Beeper:	None, included
Error handling:	Audio/visual, error triggers alarm
Overexposure handling:	Fail hypersensitive, assert persistent error state (hydrogen only)
Operating voltage:	5VDC, 7-40VDC, 7-60VDC
Enclosure:	None (open frame), anodized aluminum