

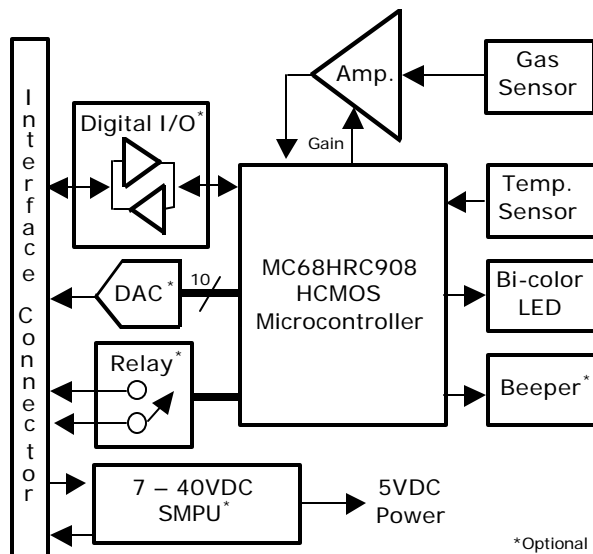
Intelligent MOS Sensor Gas Detectors

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	Carbon monoxide
Methane	Refrigerants
Propane	Various combustibles



SPECIFICATIONS (Preliminary and Tentative)

Target Gas	Chem	Range	Typ. Resol.	Typ. Accuracy	T90	Temp.
Hydrogen	H ₂	20,000 ppm	400 ppm	+/- 800 ppm	4s	-40-70
Hydrogen (trace)	H ₂	1,000 ppm	1 ppm	+/- 5 ppm	4s	0-50
Methane	CH ₄	25,000 ppm	500 ppm	+/- 800 ppm	4s	-40-70
Methane (trace)	CH ₄	1,000 ppm	1 ppm	+/- 5 ppm	4s	0-50
Propane	C ₃ H ₈	11,000 ppm	200 ppm	+/- 300 ppm	4s	-40-70
Carbon monoxide	CO	450 ppm	10 ppm	+/- 20 ppm	240s	-10-60
Refrigerants	(Rxxx)	5,000 ppm	100 ppm	+/- 300 ppm	10s	-20-70

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:	
CO models:	250 mW
Combustible models:	500 mW
Refrigerant models:	800 mW
Sensor lifetime:	5 years

ORDERING OPTIONS

Target gas:	Hydrogen, methane, propane, CO, refrigerants
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