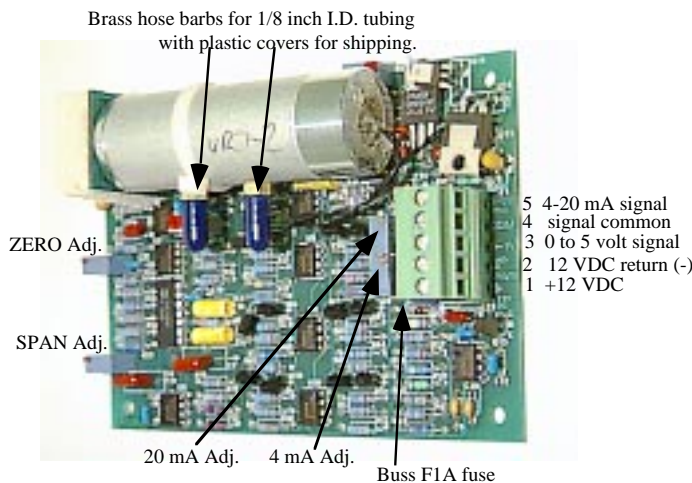




Model 2008SDH-5V 100% CH₄

Specification: 2008SDH-5V 100% Methane (CH₄): custom 0-5 volt output

- Method: N.D. I. R. (Non-dispersive Infra-red) Sample draw type gas sampling
(see VTI **Application Note A67**- Recommended Gas Conditioning)
- Gas sample hose barbs: Designed for 1/8 inch I.D. tubing and **flow rates** between **0.5** and **1.0** liter/minute
see information about our ECON-CAL™ gas calibration kits
- Gas: Carbon Dioxide (CH₄)
- Range: 0-100% CH₄
- Accuracy: ± 5% of reading (±2.5% CH₄ from 0 to 50% CH₄) - see scale data
..... **Span adjusted at 5.0% CH₄**, ±10% of reading from 51 to 100 % CH₄
..... **CAUTION: Lower Explosive Limit (LEL) is 5.0 %** CH₄ in air
..... **CAUTION: Upper Explosive Limit (UEL) is 15% CH₄** in air
..... **Note:** If this sensor is used to measure CH₄ levels near or above the LEL it should be
..... enclosed in an **explosion proof housing** with flame arrestors in the gas path.
- Repeatability: ± 1% of full scale (challenge with same gas sample and assure zero)
- External Power Source: 12 Volts D.C. @ 0.6 amp. max.(11.0 to 16.0 VDC absolute min. / max.)
- Power Consumption: less than 3 watts @ 12.0 VDC (2.4 watts typical, 7.2 watts peak at 12.0 V)
- Output Signals,
Voltage: 0 to 5 volt = 0 to 100% CH₄ (linear scale data attached)
Current Loop: 4 to 20 mA = 0 to 100% CH₄ (linear scale data attached) 300Ω max loop R
- Zero Drift at Constant Temperature: Less than 2% of full scale per 24 hours (random not cumulative)
- Zero Noise at Constant Temperature:**.. Less than **50 mV peak to peak**, measured on V out during any **20 second period**
- Zero Drift due to Ambient Temp.: Less than 0.5% of full scale per degree Centigrade
- Operating Temperature Range: 0 to 50°C (32° to 122°F) the gas laws effect the gas density and span
- Storage Temperature Range: -40 to +70°C (-40 to +158°F)
- Operating Humidity Range: 5 to 95% RH non-condensing
- Weight: Less than 0.5 pounds (0.23 kilograms)
- External Dimensions: PCB Card: 3.9" x 5" x 1.5" dimensions in inches - see diagram on page 2 for mounting



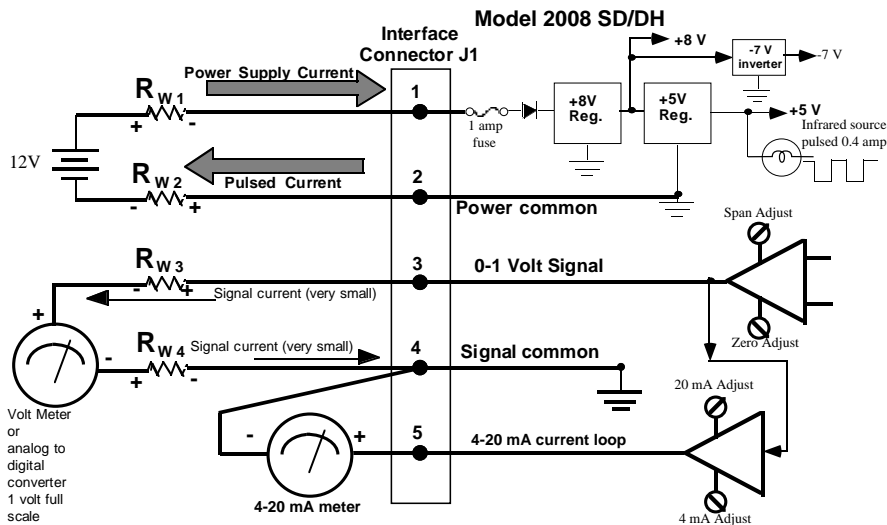


VALTRONICS 100% & 5 volt full scale 2008SDH-5V (Calibrated at 5.0% gas = 0.250 volt)

±2.5% gas							±10% of reading						
Gas in %	Output in volts	Max	Min	4-20 mA output	Max	Min	Gas in %	Output in volts	Max	Min	4-20 mA output	Max	Min
0	0.000	0.125	-0.125	4.00	4.40	3.60	52	2.600	2.860	2.340	12.32	13.15	11.49
2	0.100	0.225	-0.025	4.32	4.72	3.92	54	2.700	2.970	2.430	12.64	13.50	11.78
4	0.200	0.325	0.075	4.64	5.04	4.24	56	2.800	3.080	2.520	12.96	13.86	12.06
6	0.300	0.425	0.175	4.96	5.36	4.56	58	2.900	3.190	2.610	13.28	14.21	12.35
8	0.400	0.525	0.275	5.28	5.68	4.88	60	3.000	3.300	2.700	13.60	14.56	12.64
10	0.500	0.625	0.375	5.60	6.00	5.20	62	3.100	3.410	2.790	13.92	14.91	12.93
12	0.600	0.725	0.475	5.92	6.32	5.52	64	3.200	3.520	2.880	14.24	15.26	13.22
14	0.700	0.825	0.575	6.24	6.64	5.84	66	3.300	3.630	2.970	14.56	15.62	13.50
16	0.800	0.925	0.675	6.56	6.96	6.16	68	3.400	3.740	3.060	14.88	15.97	13.79
18	0.900	1.025	0.775	6.88	7.28	6.48	70	3.500	3.850	3.150	15.20	16.32	14.08
20	1.000	1.125	0.875	7.20	7.60	6.80	72	3.600	3.960	3.240	15.52	16.67	14.37
22	1.100	1.225	0.975	7.52	7.92	7.12	74	3.700	4.070	3.330	15.84	17.02	14.66
24	1.200	1.325	1.075	7.84	8.24	7.44	76	3.800	4.180	3.420	16.16	17.38	14.94
26	1.300	1.425	1.175	8.16	8.56	7.76	78	3.900	4.290	3.510	16.48	17.73	15.23
28	1.400	1.525	1.275	8.48	8.88	8.08	80	4.000	4.400	3.600	16.80	18.08	15.52
30	1.500	1.625	1.375	8.80	9.20	8.40	82	4.100	4.510	3.690	17.12	18.43	15.81
32	1.600	1.725	1.475	9.12	9.52	8.72	84	4.200	4.620	3.780	17.44	18.78	16.10
34	1.700	1.825	1.575	9.44	9.84	9.04	86	4.300	4.730	3.870	17.76	19.14	16.38
36	1.800	1.925	1.675	9.76	10.16	9.36	88	4.400	4.840	3.960	18.08	19.49	16.67
38	1.900	2.025	1.775	10.08	10.48	9.68	90	4.500	4.950	4.050	18.40	19.84	16.96
40	2.000	2.125	1.875	10.40	10.80	10.00	92	4.600	5.060	4.140	18.72	20.19	17.25
42	2.100	2.225	1.975	10.72	11.12	10.32	94	4.700	5.170	4.230	19.04	20.54	17.54
44	2.200	2.325	2.075	11.04	11.44	10.64	96	4.800	5.280	4.320	19.36	20.90	17.82
46	2.300	2.425	2.175	11.36	11.76	10.96	98	4.900	5.390	4.410	19.68	21.25	18.11
48	2.400	2.525	2.275	11.68	12.08	11.28	100	5.000	5.500	4.500	20.00	21.60	18.40
50	2.500	2.625	2.375	12.00	12.40	11.60							

Note: Flow rate through the gas cell should not exceed 1000 mL (1.0 L) per minute to assure that the gas cell is not pressurized. A pressure in the gas cell above atmospheric pressure will result in a SPAN error (gas law). See Application Note A12.

Accuracy: ±2.5% CH₄ (±0.125 volt) from 0 to 50.9% CH₄ and ±10% of reading from 51 to 100% CH₄.



• The pulsating power supply return current will take the path of least resistance. If the wire from pin# 2 is large and short it will travel through it and not in the signal path which would introduce an offset and noise. The SIGNAL COMMON must have a separate wire for signal current to flow through. There must be a minimum of four (4) wires. A three (3) wire connection where one wire is used for both power supply and signal common will **not work** even with the current loop.

