

MSA Solaris® FX Multigas Detector Addendum

These Solaris FX instructions are to be used as an addendum to Solaris Multigas Instruction Manual (P/N 10046201). This addendum replaces manual information given in Chapter 6, TABLE 6-3 and TABLE 6-4, and in Chapter 7, TABLE 7-1 for Solaris FX units only. The Solaris FX Multigas Detector must be installed with a 4P-50 combustible sensor (P/N 10055614) only.

Table 6-3. COMBUSTIBLE GAS - Typical Performance Specifications

RANGE	0 to 100% LEL or 0 to 5.00% CH ₄
RESOLUTION	1% LEL or 0.05% CH ₄
REPRODUCIBILITY	3% LEL, 0% to 50% LEL reading or .15% CH ₄ , 0.00% to 2.50% CH ₄ (normal temperature range*)
	5% LEL, 50% to 100% LEL reading or .25% CH ₄ , 2.50% to 5.00% CH ₄ (normal temperature range*)
	5% LEL, 0% to 50% LEL reading or .25% CH ₄ , 0.00% to 2.50% CH ₄ (extended temperature range*)
	8% LEL, 50% to 100% LEL reading or 0.40% CH ₄ , 2.50% to 5.00% CH ₄ (extended temperature range*)
RESPONSE TIME	90% of final reading in 20 seconds (methane)
	*See TABLE 6-2 NOTE

NOTE: These results are typical. Some sensors may fall outside of this range. For best results, calibrate the sensor at the temperature of use.

Table 6-4. COMBUSTIBLE GAS - Cross Reference Factors

This TABLE shows the variation in response of the 4P-50 CiTipeL® on exposure to a range of gases and vapors at the same % LEL concentration.

GAS VAPOR	RELATIVE SENSITIVITY*	GAS VAPOR	RELATIVE SENSITIVITY*
Methane	100	Carbon monoxide	115
Propane	65	Acetone	70
nButane	65	Methyl ethyl ketone	55
n-Pentane	60	Toluene	40
n-Hexane	50	Ethyl acetate	60
n-Heptane	45	Hydrogen	115
n-Octane	40	Ammonia**	130
Methanol	95	Cyclohexane	55
Ethanol	85	Leaded petrol	60
Iso-propyl alcohol	60	Unleaded petrol	60
Acetylene	80	Ethylene	85

*Each sensitivity has been rounded to the nearest 5%.

**T₉₀ for Ammonia is extended. Contact City Technology for details.

Response Notes

1. The compounds may reduce the sensitivity of the combustible gas sensor by poisoning or inhibiting the catalytic action.
2. These compounds may reduce the sensitivity of the combustible gas sensor by polymerizing on the catalytic surface.
3. The figures are experimentally derived and expressed relative to the methane signal (= 100).
4. These conversion factors should be used only if the combustible gas is known.
5. The results are intended for guidance only. For the most accurate measurements, an instrument should be calibrated using the gas under investigation.

Table 7-1. Solaris FX Replacement Parts List

ITEM NO.	PART	PART NO.
1	Gasket, Sensor	10055500
2	CO Button Cell Sensor	10046944
3	H ₂ S Button Cell Sensor	10046945
4	O ₂ Sensor	10046946
5	Combustible Sensor - Solaris FX	10055612
6	Case, Assembly, Front	10055515

ITEM NO.	PART	PART NO.
10	Sensor, Plug, Inactive, Button Cell (quantity: up to 2)	10046292
11	Insert, Support, Combustible Sensor	10046762
12	Insert, Support, O ₂ Sensor	10046763
13	Filter, Charcoal, CO	10047967
14	Charger, Cradle, Assembly	10048185
15	Felt, Protection (quantity: 4)	10044927
16	Cap, Calibration Assembly	10044994
17	Fitting, Male Tapper Luer (quantity: 2)	637266
18	North American Power Supply	10047342
19	Global Power Supply	10047343
20	Rear Case Assembly (includes battery)	10044997
20	Rear Case Assembly (Euro)	10053219
21	Main PC Board Assembly, Non-I.R.D.A.	10045008
22	Main PC Board Assembly, I.R.D.A.	10045009
23	Label, Sensor Cover (quantity: 2)	10049052
24	Case Screws (quantity: 5)	655289
25	Main PC Board Assembly Screws (quantity: 2)	10046937
26	Horn Chamber Protective Insert	10046042
	Combustible, O ₂ , CO, H ₂ S Solaris FX Sensor Kit	10055613