



Bump Test Gas Concentrations for MPS™ Flammable Gas Sensor

The following compressed gas cylinder mixtures can be applied to the MPS while it is already operating in normal, ambient air. Ambient air consists of 78.08% Nitrogen, 20.95% Oxygen, 0.93% Argon, and 0.04% Carbon Dioxide, by volume. This constitutes the air that we typically breathe, only without humidity. The addition of the flammable gas reduces the relative concentrations of the other constituents, with examples shown here for 50 %LEL concentrations of methane (ISO and IEC) and for pentane (ISO); however, this method can also be applied to other flammable gases. Contact NevadaNano for guidance.

	Nitrogen	Oxygen	Argon	CO ₂	Flammable Gas
Synthetic (dry) air at 50 %LEL (ISO) methane	76.13%	20.43%	0.91%	0.04%	2.50%
Synthetic (dry) air at 50 %LEL (IEC) methane	76.36%	20.49%	0.91%	0.04%	2.20%
Synthetic (dry) air at 50 %LEL (ISO) pentane	77.49%	20.79%	0.92%	0.04%	0.75%

The following compressed gas cylinder mixtures can be used for single- or multi-gas monitors. These are also applied to the MPS while it is already operating in normal, ambient air.

	Nitrogen	Oxygen	Argon	CO ₂	Flammable Gas	H ₂ S	CO
"Quad Mix" with 50 %LEL (ISO) methane	Balance	18.00%	0%	0%	2.50%	25 PPM	100 PPM
"Quad Mix" with 50 %LEL (IEC) methane	Balance	18.00%	0%	0%	2.20%	25 PPM	100 PPM

The following compressed gas cylinder mixtures can be delivered only if the sensor has been initialized in zero air prior to delivery of the gas. Zero air consists of only 79.1% Nitrogen and 20.9% Oxygen by volume.

	Zero Air	Flammable Gas
50 %LEL (ISO) methane	Balance	2.50%
50 %LEL (IEC) methane	Balance	2.20%