



TAKING INVENTIVE STEPS IN INFRARED....

## TECHNICAL DATA SHEET



### PREMIER RANGE OF GAS SENSORS



The Premier range of gas sensors covers two basic types, hydrocarbon and carbon dioxide. Within these ranges there are numerous options for target gas and concentration. The hydrocarbon sensors can be characterised for a specific gas type. In this instance, the sensor output will be linearised and temperature compensated for the gas specified. In addition to the target gas, the hydrocarbon sensors will respond to a wide range of other gasses. Using cross-reference data, it is possible to measure gasses other than the target gas. Users should be aware, however, that the sensor will still respond to gasses other than the cross-referred gas. The cross-reference values are intended to provide an approximate indication of gas concentration, the accuracy of these readings will not be as high as the accuracy obtained when measuring the target gas. In addition, there will be errors introduced when measuring cross-referred gasses at temperatures away from normal ambient temperature. Nonetheless, it can be very useful to exploit this aspect of the sensor's behaviour.

The following table provides a list of the gasses for which the Premier sensor has been characterised. In addition, the table lists the gasses for which cross-reference data is available. Note that some gasses can be cross-referred using a linear factor, others require non-linear factors. Data is available for the non-linear relationships. The sensor can also be characterised for gasses other than those listed here, contact Dynamant for more details. Technical Data Sheet TDS0016 provides information on the sensor's response to a wide range of gasses. The full range of Technical Data Sheets and Application Notes can be found on the Dynamant website at [www.dynamant.com](http://www.dynamant.com)

The range of gasses that can be currently be measured using the Premier hydrocarbon sensor is as follows:

***Methane, propane, propylene, pentane, butane, hexane, ethane, ethanol, ethylene, ethylene oxide, isopropanol, acetic acid, methanol, methyl bromide, toluene.***



### Dynamant Limited

Premier House · The Village · South Normanton · Derbyshire · DE55 2DS · UK.  
Tel: 44 (0)1773 864580 · Fax: 44 (0)1773 864599  
email: [sales@dynamant.com](mailto:sales@dynamant.com) · [www.dynamant.com](http://www.dynamant.com)

## PREMIER HYDROCARBON SENSORS

GAS TYPE	SENSOR RANGE	COMMENTS
METHANE	0 – 5% volume	Fully characterised for methane. Linear factor available for toluene (0 – 1.1% vol.) and acetic acid (0 – 4% vol.) no span temperature compensation
METHANE	0 – 100% volume	Fully characterised for methane
PROPANE	0 – 2% volume	Fully characterised for propane. Linear factor available for isopropanol (0 – 2% vol.) and methanol (0 – 5.5% vol.) no span temperature compensation
PROPYLENE	0 – 2% volume	Fully characterised for propylene
BUTANE	0 – 5% volume	Sensor output linearised for butane, no span temperature compensation
PENTANE	0 – 2% volume	Sensor output linearised for pentane, no span temperature compensation
HEXANE	0 – 3% volume	Sensor output linearised for hexane, no span temperature compensation
ETHYLENE	0 – 3% volume	Sensor output linearised for ethylene, no span temperature compensation
ETHYLENE OXIDE	0 – 3% volume	Fully characterised for ethylene oxide
ETHANOL	0 – 5% volume	Sensor output linearised for ethanol, no span temperature compensation
METHYL BROMIDE	0 – 25,000 ppm	Sensor output linearised for methyl bromide, no span temperature compensation

## PREMIER CARBON DIOXIDE SENSORS

GAS TYPE	SENSOR RANGE	COMMENTS
CARBON DIOXIDE	0 – 500 ppm	10 ppm resolution
CARBON DIOXIDE	0 – 1000 ppm	20 ppm resolution
CARBON DIOXIDE	0 – 2000 ppm	50 ppm resolution
CARBON DIOXIDE	0 – 5000 ppm	50 ppm resolution
CARBON DIOXIDE	0 – 10,000 ppm	100 ppm resolution
CARBON DIOXIDE	0 – 2% volume	250 ppm resolution
CARBON DIOXIDE	0 – 5% volume	250 ppm resolution



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