



MCO MediceL[®] - Pack of 10

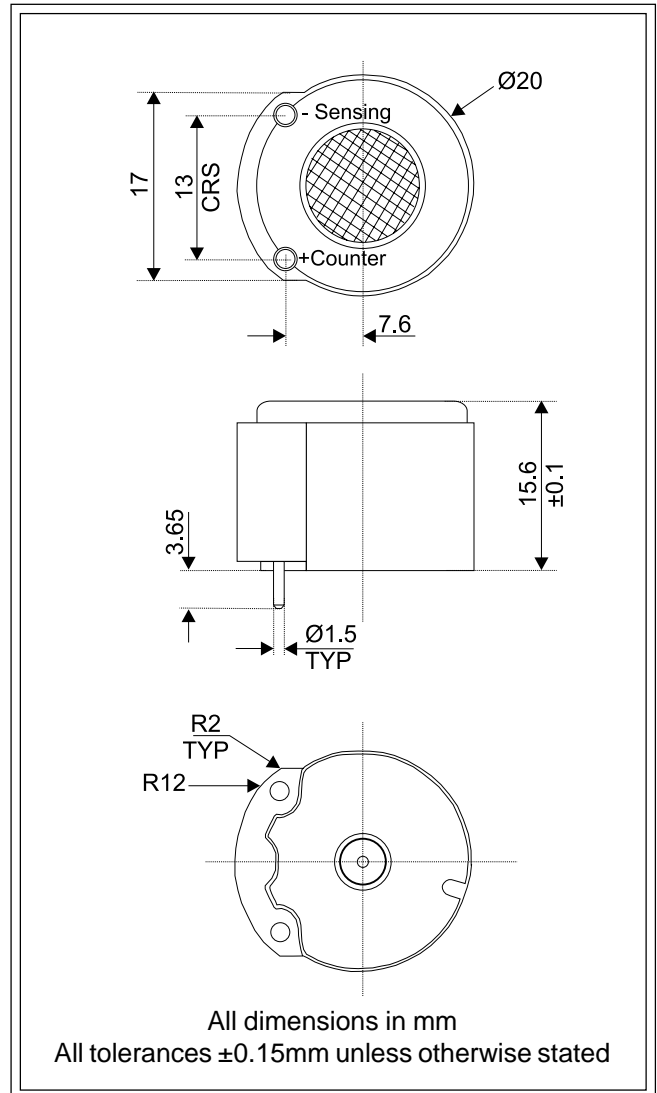
(Filter to remove trace alcohol levels)

Performance Characteristics

Nominal Range	0-100ppm
Maximum Overload	200ppm
Expected Operating Life	Two year in air
Output Signal	75±15nA/ppm
Resolution	1ppm
Temperature Range	-20°C to +50°C
Pressure Range	Atmospheric ± 10%
T₉₀ Response Time	<45 secs
Relative Humidity Range	15 to 90% non-condensing
Typical Baseline Range (in air)	-2ppm to +6ppm CO equiv.
Long Term Output Drift	<15% signal loss/year*
Repeatability	2% of signal
Output Linearity	Linear
Filter Life	12.5 ppm hrs ethanol

N.B. All performance data is based on conditions at 20°C, 50%RH, and 1013mBar

* Initial drift over first 3 months may be greater than 1.25%/month. Drift will stabilise to <15%/year



Physical Characteristics

Weight	Approx 5g
Position Sensitivity	None
Storage Life	Six months in CTL blister pack
Recommended Storage Temperature	0°C to 20°C
Warranty Period	12 months from date of despatch
Pack Size	Supplied in blister packs of 10

Cross-sensitivity

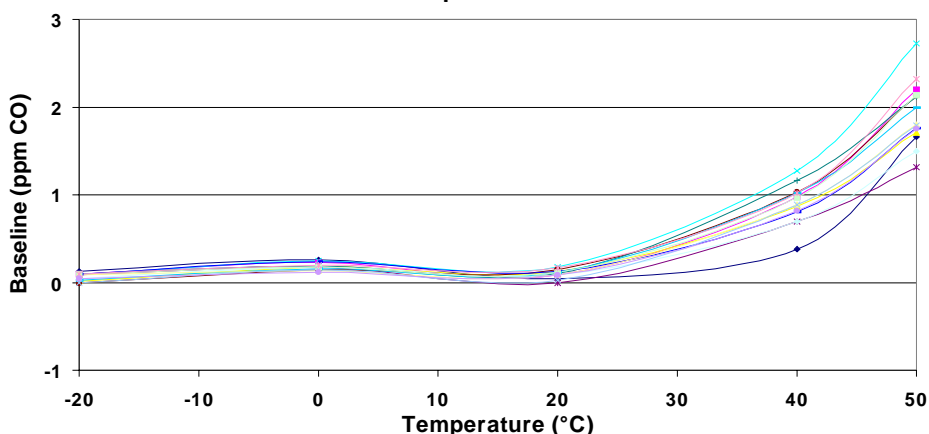
Cross-interference levels found when the MCO is exposed to 20ppm of the following gases are given below:

H₂	<15%
NO	<20%

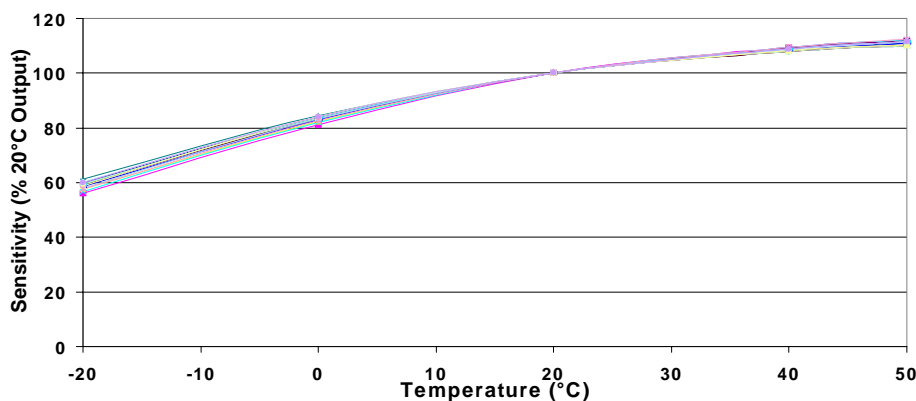
Carbon Monoxide MediceL[®] Specification



Graph Plotting Baseline of MCO Sensors against Temperature



Graph Plotting Sensitivity of MCO Sensors against Temperature



Circuitry

The MCO MediceL is a two electrode sensor for monitoring low levels of carbon monoxide. Compared to three electrode MediceLs the performance of this sensor is limited. The circuitry required for operation, however, is much simpler.

MediceLs are current generators, and the output from a two electrode sensor may be measured by simply connecting a low value load resistor (e.g. 33 Ohm) across the terminals and measuring the resultant voltage. No external power is required. Alternatively the sensor can be operated in a current follower mode, using an op-amp to convert the current output into a voltage. In this way the response time may be reduced by using a lower value load resistor (e.g. 10 Ohm). A suitable circuit is shown in figure tox2, where the load resistor is shown as R_{Load} . When the op-amp is turned off the terminals are shorted together by the J-FET.

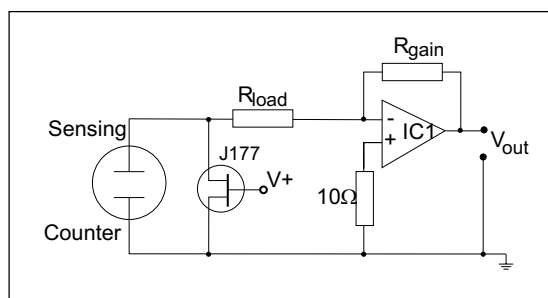


Figure tox2

Two electrode MediceL operating circuit

IC1 - This amplifier acts as a current to voltage converter and its offset performance is not critical. The OP-77 or similar is a suitable choice

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Performance characteristics on this data sheet outline the performance of newly supplied sensors. Output signal can drift below the lower limit over time.