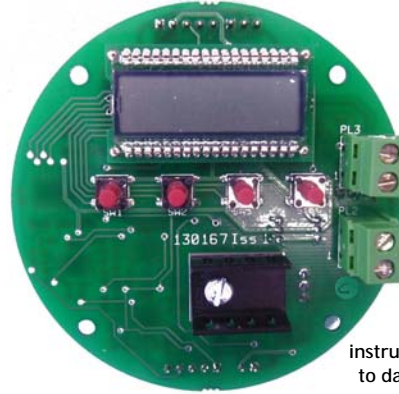


OEM MODULE TYPE OEM-1 FOR USE WITH THE “STANDARD” RANGE OF INFRARED GAS SENSORS



For operating instructions, please refer to data sheet TDS 0008

This module has been designed by Dynamant to provide OEM development engineers with a fast track route to market utilising the **Gold Series** range of infrared sensors. Requiring only a dc power supply, the module provides all the hardware and embedded software necessary to drive the sensor, extract the signals and convert them into a linearised analogue output proportional to gas concentration.

FEATURES

- ◆ Compact design for use within standard explosion proof enclosures (pcb dia. 78mm, 3.1 in.)
- ◆ Quickest route into the Infrared market
- ◆ High resolution 12 bit A-D converter
- ◆ Regulated lamp drive circuit
- ◆ Pushbutton operation and onboard LCD for simple set-up and calibration only
- ◆ 4-20mA analogue output, 10 bit, with current limit and polarity protection
- ◆ Data collection mode and RS232 data output facility remote monitoring and data logging
- ◆ Polarity protected input for single 8-30V, 70mA dc supply
- ◆ Optional sensor mounting and gas sampling adaptor

DESCRIPTION OF OPERATION

The circuitry provides a regulated, 4Hz. square-wave drive to the sensor's lamp. The resulting signals from the sensor's Detector and Reference outputs are amplified to a suitable level and processed by the A/D converter. Using the program appropriate to the type of sensor selected by the user, the microcontroller uses the signals from the sensor to provide a linearised drive to the analogue output circuit.

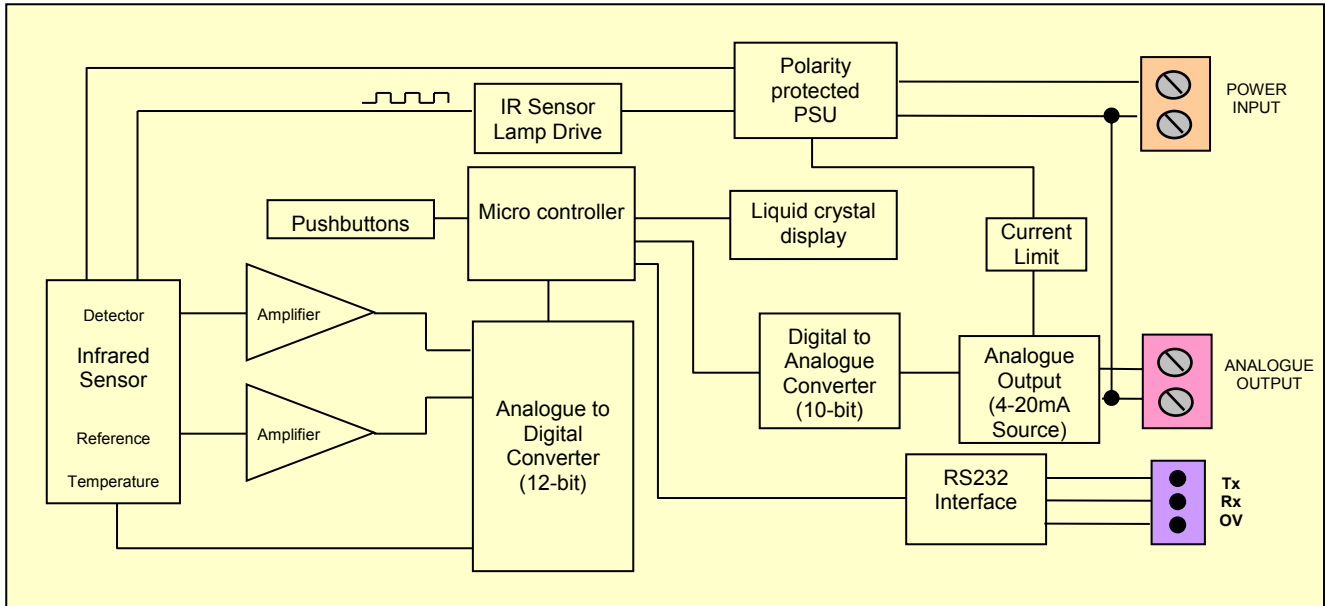
In order to calibrate the OEM module, it is necessary to present a “zero” gas sample and a “span” gas sample to the sensor.

There are 4 pushbuttons and a 4 digit display on the OEM module. These enable the user to select from the following options:

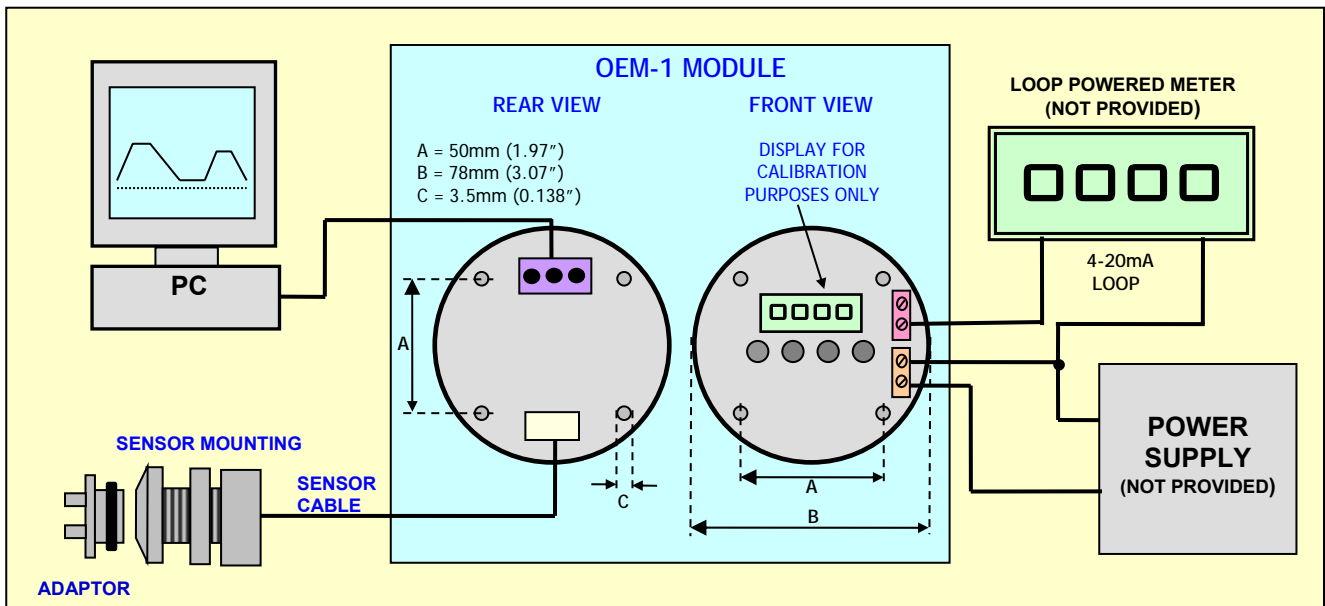
- ◆ Sensor type select i.e. Carbon Dioxide, Methane etc.
- ◆ Sensor zero mode
- ◆ Sensor span mode
- ◆ Analogue Output zero mode
- ◆ Analogue Output span mode
- ◆ Run mode
- ◆ Data observation mode

The on-board display is for set-up and calibration only. When module is used in an instrument, a separate display is required. (See 'Typical Application' overleaf).

MODULE BLOCK DIAGRAM



TYPICAL APPLICATION



ORDERING INFORMATION

ITEM	DYNAMENT PART NUMBER	
OEM MODULE	OEM - 1	
SENSOR CABLE AND CONNECTOR (Supplied free of charge when sensor and OEM Module are ordered together)	OEM - 1-CABLE (130mm, 5.1")	REFER TO DATA SHEET TDS 0009 FOR FURTHER DETAILS ON THESE ITEMS
SENSOR MOUNTING	OEM - 1- MTG	
GAS SAMPLING ADAPTOR	OEM - 1- ADTR	
NOTE: INFRARED SENSORS ARE SUPPLIED SEPARATELY, REFER TO SENSOR DATA SHEETS FOR ORDERING INFORMATION		

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