



Model 1734
Carbon Controller



Accurate Carbon Potential Measurement for Heat Treatment Applications

Using the Novatech 1734 is easy and convenient :

Simply enter the gas component data via the analyser's keypad.

The 1734 is self-calibrating, performing a calibration cycle for all inputs, every minute.

Output to a computer or printer is provided via RS233 or RS485 ports, facilitating diagnostics of the analyser, probe or combustion appliance.

The Novatech 1734 Controller readily adapts to your process control system :

The 1734 Controller has two 4-20mA linearised outputs to operate with remote controllers and/or indicators.

The instrument's common alarm relay can activate remote process alarm devices.

The separate, 'probe not ready' alarm relay prevents erroneous operation.

During auto-purge cycles, the analyser output is frozen, and the purge relay is activated.

An alarm horn driver relay is provided.

Novatech's dual sensor redundancy feature prevents costly shutdowns if a probe failure occurs.

The Novatech 1734 Carbon Controller accepts inputs from two sensors, averaging the two readings, or providing separate 4-20mA outputs for each sensor. In case of either one of the sensors failing, the analyser warns the operator and locks onto the remaining sensor so that the process can continue to operate.

The Novatech 1734 has a built-in carbon controller thus providing furnace atmosphere control featuring :

ON/OFF control

Proportional 4-20 mA control signal

Proportional ON/OFF control

Proportional Up/Down control

Note: gases allowed for are propane, methane, nitrogen/methanol mix.

Call your nearest Novatech distributor to obtain expert advice for your particular application. We have been dedicated to designing and manufacturing the most reliable zirconia oxygen measuring instruments for more than 25 years

Novatech
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Inputs

- One or two zirconia oxygen probes or sensors
- One zirconia sensor & auxiliary thermocouple type J, K, R, S or N
- Burner "On" signal (dry contact)
- Purge air flow switch

Outputs

- Four programmable alarm relays
- Two isolated 4-20mA or 0-20mA
- SSR outputs to purge & calibration check gas solenoid valves

Range of Outputs

- Carbon 0 to 1.5%
- Average Carbon 0 to 1.5%
- Probe EMF0 to 1500mV
- Probe TC Temperature 0 to 1600°C
- Oxygen % 0 to 25%
- Reducing Oxygen 10^{-30} to $10^2\%$
- Auxiliary TC Temperature 0 to 1600°C

Alarms

- Common alarm relay with 20 user selectable instrument alarm functions
- Three Programmable process alarm relays
- Carbon Low
- Carbon High
- Carbon Deviation
- Probe Temperature Low
- Purge in Progress
- Carbon Invalid
- Any alarm condition not selected for the common alarm
- Multiple selections can be made for all relays

Alarm Contacts

- Normally open failsafe (open for alarm state)
- 240VAC / 30VCD, 2A

Range of Local Indication

- 0.00 to 2.00% Carbon Potential

Network Interface

- RS232
- RS-485 MODBUS

Secondary Parameter Display

- Probe 2 Carbon %
- Average Carbon %
- Probe 1/2 TC Temperature
- Probe 1/2 EMF
- Probe 1/2 Impedance
- Probe 1/2 Oxygen %
- Auxiliary TC Temperature
- Ambient Temperature
- Ambient RH%
- Controller Set Point
- Runtime
- Service Date
- 4-20mA Output 1
- 4-20mA Output 2

Options available will vary depending on device configuration

Accuracy

- $\pm 1\%$ of the actual oxygen reading with a repeatability of 0.5%.
For example, at 2% oxygen the accuracy would be $\pm 0.02\%$ oxygen.

Environmental Rating

- Operating Temperature -25°C to 55°C
- Relative Humidity 5% to 95% (non-condensing)
- Altitude 2000m Maximum

Power Requirements

- Mains Voltage 100 to 240VAC -6 +10%, 50/60Hz
- Overvoltage Category II (IEC60364-4-443)
- Requires 5W for controller plus probe power

Degree of Protection

- IP65
- IP54 with internal reference air pump

Dimensions

- 315mm W x 190mm H x 110mm D

Weight

- 3kg

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