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SPECIFICATIONS

MODEL 203 20-Bit Serially Interfaced Data Acquisition System

A/D TYPE: 20-bit delta-sigma converter with RISC microcontroller supervisor

MONOTONICITY: 20 bits

LINEARITY: $\pm 0.006\%$ of full scale, typical

DIFFERENTIAL INPUT RANGE: ± 5 volts (voltages from +5.0 to +6.5 and from -5.0 to -6.5 can be measured with slightly reduced accuracy.)
Custom gains are available for input ranges between ± 5 and ± 0.1 volts

DC COMMON MODE RANGE: ± 6.5 volts

DC COMMON MODE REJECTION: -96 dB minimum

ANALOG INPUT: single, true differential, protected to ± 60 v

INPUT IMPEDANCE: 100,000 megohms typical

LINE FREQUENCY REJECTION: Programmable, 50 or 60 Hz (-86 dB min)

PROGRAMMABLE DATA RATE: 0.5 to 120 Hz

The Model 203 has a programmable data rate which also determines the cut-off frequency of the low-pass filter. Effective resolution increases as the data rate decreases. Representative values are given below. Effective resolution is defined as total resolution in bits minus RMS noise in bits.

Rate	Effective Resolution in Bits	Cut-off Frequency
120	15.0	24 Hz
60	16.0	12 Hz
30	17.0	6 Hz
20	17.5	4 Hz
10	18.5	2 Hz
5	19.5	1 Hz
2	20.5	0.4 Hz
1	21.5	0.2 Hz

ANALOG OUTPUTS: 2, programmable 10 to 14 bit resolution, settling time 1 sec for 99% of full-scale step at 14 bits (Faster settling is available as a special option.)

DIGITAL INPUT: single bit, contact closure or 5 volt logic compatible

DIGITAL OUTPUTS: 8, latched, ruggedized, double-buffered 5 volt outputs

POWER REQUIREMENT: 11 to 16 VDC, regulated (15 to 22 VDC regulated or unregulated with pre-regulator option)

TYPICAL POWER CONSUMPTION: 65 milliamps (plus drive current for digital outputs)

SIZE: 3.4 x 6.5 x 0.9 inches

SERIAL INTERFACE: RS232, optically isolated, full duplex. Programmable from 300 to 9600 BAUD with automatic BAUD rate detection. Checksum transmitted on request.

OTHER FEATURES: Signal averaging and integration are available under software control. The Model 203 can operate in polled or scanning mode. In polled mode, individual readings are transmitted on request. In scanning mode, data is transmitted at a pre-defined rate. The user has complete control over digital and analog outputs while scanning. The analog input stream is not disrupted by other input/output.

OPTIONS: For improved accuracy and temperature stability, a precision voltage reference option is offered at \$20. If a regulated power supply is not available for use, add \$20 for the power supply option. It includes an onboard regulator plus a wall-mounted power supply.

CUSTOM MODIFICATIONS: The Model 203 can be customized to perform a variety of tasks. If you do not see a particular feature here, call for a quotation.

SINGLE-PIECE PRICE: \$250, driver software and serial cable included.

OEM PRICE: \$150 (quantity 1000)

AVAILABILITY: Stock to 2 weeks