4 1/2 DIGIT STRAIN GAGE READOUT/CONTROLLER

DCI   **MILLIVOLTS**

193.6

LO●   HI

2 9 4 0   4 2 0 1

SERIES 230C

FEATURES
- ASCII RS232 Interface (optional)
- Analog output, 4-20mA or 0 to ± 10 VDC (optional)
- Dual or single limit set points
- Optional polarity control and display
- Heavy duty form C relay closure for each limit
- 10 volt excitation referenced to voltmeter reference
- Front panel span and zero adjust
- Optional three state parallel BCD outputs with single line enable
- Optional dead zero (LSD) to 5 1/2 digit display

A single or dual set point comparator and strain gage readout with bridge excitation in one package are just a few of the features that make this readout unique in the panel instrumentation field. No wiring between two units is required, just apply power, hook up your strain gage, dial in the set points and the unit will indicate if the input is above, between, or below the set points. Scaling is easily accomplished by making a few solderless jumpers internally and DCI will scale the unit prior to shipment. Just specify the number of millivolts per volt and the full scale reading desired when placing order. For instance, if the strain gage has an output of 3 millivolts/volt, which represent 0-1836.0 pounds, DCI will program the reference and calibrate the meter at no additional charge. Outputs include heavy duty form "C" relay contacts for low and high, TTL logic level outputs for low, in, and high, plus optional parallel three state BCD or RS 232 interface.

SERIES 230C SPECIFICATIONS

Accuracy: ± .03% reading ± 2 counts @ 25 degrees Celsius. Temperature coefficient 25PPM/degree Celsius.

Differential input impedance: 10^9 ohms.

Input Voltage range: 0 to ± 100 millivolts, resolutions down to 1 microvolt.

NMRR: 70db; **CMRR:** 70db.

Front Panel controls: Thumbwheel switches 4 1/2 digits, 0-9 and optional polarity selector for each limit.

Visual indicators: Four and one half digits. Red LEDs ± 19999. Decimal points programmable on rear I/0 connector.
Red LED dots for "LO" and "HI", both dots out during "IN" condition.

Inputs:
External convert/hold: Requires logic zero to hold. For single conversion, hold must be allowed to go high for a minimum of 10 milliseconds and a maximum of 100 milliseconds. For continuous run operation hold line must be left open or high. Input loading 1 LPTTL load.

Three state input: Requires logic level zero. Forces BCD outputs to a high impedance state for bussing applications. Input loading 1 LPTTL load. Pulled up internally with 20Kohm resistor.

Latch input: Requires logic zero. Latches BCD data without affecting display. Data will be held as long as latch is held low. Input loading 1 LPTTL load. Pulled up internally with 20Kohm resistor.

Outputs:
Excitation output: 10VDC ± 100 mv ± 10PPM/°C. Will drive 87 ohm load.

ASCII RS232 compatible (optional); format: 1 start bit, 8 data bits, 1 stop bit, and no parity bits.

BCD outputs (optional); latchable 3 state + 8421 TTL logic level for each digit plus overrange and polarity. Will drive 4 TTL loads.

4-20mA output (optional); maximum load 500 ohms. Offset and span programmable via solderless jumpers and potentiometers.

Analog output (optional): 1mV per digit into 10K ohm (maximum 10 volts).

5 volt logic level output for "LO", "IN", and "HI", will drive three TTL loads.

Form C relay closure for each limit. Contact ratings (resistive) 6 amps @ 28VDC, 2.5 amps @ 115VAC, 1 amp @ 230VAC.

Conversion rate: Three per second standard, optional seven and one-half per second.

Power:
115VAC 50-400 hz, 8 watts maximum
230VAC 50-400 hz, 8 watts maximum (optional)
10-30VDC 500 mA max. (optional)
5VDC 600 mA max. (optional)

Case size: "B" See page 39.

Operating temperature: −20° to +60° Celsius.

I/O connectors: #4 screw terminals for 115V power and the analog input. All other inputs and outputs via card edge connector with solder tabs. (Supplied)

OPTIONS
- 01   Latched, three state, parallel BDC outputs, TTL compatible.
- 02   Polarity control & indication
- 05   5VDC input power. 600mA maximum required.
- 07   7 1/2 conversions per second
- 08   4-20mA output, max load 500ohms
- 09   Analog output, tracks input. (Max. 10VDC into 10Kohm).
- 10   ASCII RS232 computer interface   (231C, 232C)
- 11   Unregulated excitation output voltage 25VDC ± 10% @ 100mA (No 10 volt excitation)
- 15   ± 15VDC ± 5% excitation output voltage @ 30mA per voltage. (No 10 volt excitation)
- 18   Dead zero (LSD) for 5 1/2 digit display
- 20   EOC pulse; 1msec; Negative going pulse.
- 22   230VAC; 50-400hz input power.
- 23   Green display LED's
- 24   10-30VDC input power. 500mA max.
- 25   Special legends and/or logo (special artwork to be supplied by customer).
- 26   No logo.
- 27   Screw terminal I/O connector.   (Models 231C & 232C) (Model 230C
- 28   Blank lens.
- 30   "MILLIVOLTS" legend.
- 38   "PSIG" legend.
- 39   "PSIA" legend.
- 40   "PSI" legend
- 41   "POUNDS" legend
- 50   Sunlight readable .6" LED display. No polarity available.

MODELS:
230C   19999, 0 to ± 100 millivolts DC maximum, no control set points.
231C   19999, 0 to ± 100 millivolts DC maximum, single set point control.
232C   19999, 0 to ± 100 millivolts DC maximum, dual set point control.
NOTE: Specify mV/V and span when placing order.