

PROCESS & CURRENT LOOP INPUT DPM,

3½ & 4½ DIGIT

- RS232/422 • Peak & Hold • 3-State BCD • Digital Limit
- Excitation/Compliance • Analog Output • PC Compatible

MODEL

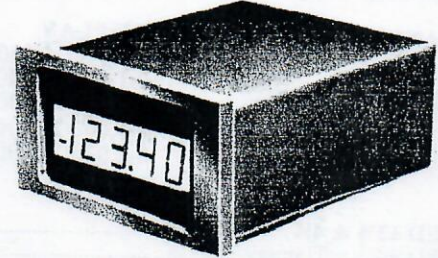
207



LED

FEATURES

- Built-in 24VDC Compliance
- Detects Transmitter Under, Over-range and Open/Short
- Low Input Impedance and Wide Zero and Span
- 1/8 DIN & NEMA Compatible Cut-Out
- 3½, 4½ Digit LED & LCD Display with/wo Dummy Digit
- 7 Power Inputs
- MTBF: 100,000 Hours



LCD

CURRENT LOOP

DESCRIPTION: In addition to conditioning the input signal, the 207 has a built-in analog comparator (field adjustable) to detect when the input signal is out of range. When an out of range condition occurs, the 207 is switched to a flashing mode. It will flash the display and its over-range logic output is switched to logic 1 for external use. Factory adjustment of the detector is set at 10% below the false zero and 100% of full scale. The optional internal excitation source makes the 207 a complete process system DPM.

CONNECTOR(S): A standard screw type connector for power and signal input is used. The I/O ports (top board) have industry standard flat cable connectors according to the function. All mating connectors are supplied at no charge.

DISPLAY: High efficiency $\pm 3\frac{1}{2}$, $\pm 4\frac{1}{2}$ digit LED, with or without dummy digit or its LCD high contrast low power equivalent. Dummy digit is programmable as a $\times 10$ multiplier or alpha A, C, F, H, E, L, P, etc.

INPUT RANGES: Industry's most popular ranges are standard. Contact Otek for special input ranges or scaling.

EXCITATION (COMPLIANCE) AND ANALOG CONTROL OUTPUTS: The most popular combinations to match transducers are available. See Specifications & Ordering Information. The 4-20mA outputs are ideal for **Proportional Control**.

DIGITAL CONTROL OUTPUT OPTIONS

- Option 1: BCD PARALLEL TRISTATE NON-ISOLATED, TTL compatible, Bit addressable, with a 34 Pin Flat Ribbon connector.
- Option 2: BCD PARALLEL TRISTATE OPTO-ISOLATED to 1500VDC, TTL compatible bit addressable, with a 34 Pin Flat Ribbon connector.
- Option 3: DIGITAL PEAK & HOLD WITH RECALL holds and recalls the greatest positive and negative peak when enabled, otherwise it displays current data. A 34 Pin Flat Ribbon connector is included.
- Option 4: DIGITAL LIMIT compares internal BCD data to an external BCD word (Multiplex Format) from Thumbwheel Switches or any TTL source. Its two 1 amp SPDT relays (for over and under) control external loads. It is field programmable for hysteresis of 10 or 100 counts. A 34 Pin Flat Ribbon connector is supplied.
- Option 5: RS232C converts the "ULTIMA 200" to a data acquisition system. Up to 32 stations and baud rates from 150-19,200. See Model A81-2450.

Option 6: RS422 This is the high-speed, longer distance version of RS232C with same features. See Section 7 Model A81-2450.

Option 7: PARALLEL BCD WITH PEAK & HOLD: This option combines both options (1 & 3) on the same board.

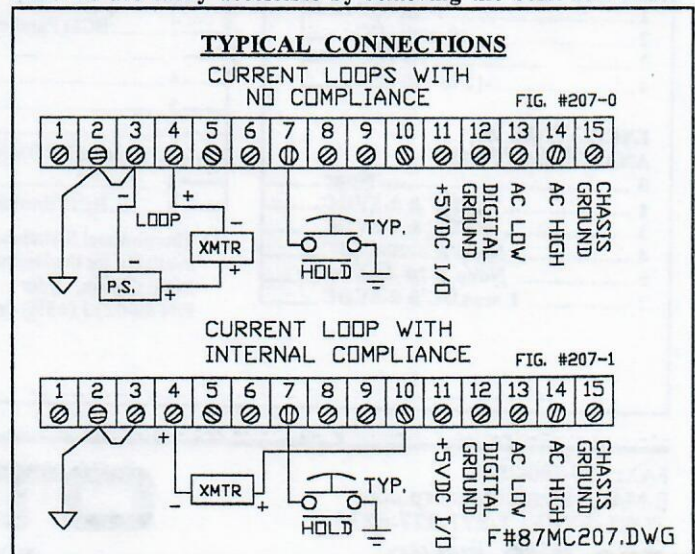
Option 8: 8-BIT ENCODED BCD MUX: The output of the A/D (same as display) is presented on an 8 bit BUS containing the BCD (1, 2, 4, 8) plus over-range, under-range, and sign are encoded in 3 lines. A separate strobe BCD word line is included. This system is compatible to any 8 bit BUS system. Address selection is available.

Option 9: 8-BIT ENCODED BCD OPTO-ISOLATED: Same as option 8 except it is opto-isolated to 1500VRMS. Power requirement is 5VDC at 100mA.

POWER INPUTS: Seven options are available: 5VDC non-isolated, 120VAC, 50-60Hz & 240VAC, 50-60Hz isolated to 1200VDC or RMS, 10VAC, 40-400Hz non-isolated, 12VDC non-isolated, 7-32VDC non-isolated and 7-32VDC isolated.

CASE: U.L. approved ABS Polycarbonate 94VO rated. Meets 1/8 DIN and NEMA panel cut out requirements.

FULL SCALE, DECIMAL POINTS, AND OTHER ADJUSTMENTS are easily accessible by removing the bezel and filter.



SPECIFICATIONS AT 25°C

MAINFRAME

Input Single Ended, Bipolar
 Zero and Full Scale Adjustment ±500 Counts for 3½ Digit,
 ±5000 for 4½
 CMRR 90dB
 CMV 3VDC or RMS
 Accuracy & Linearity ±0.01% of F.S. ±1 Digit
 Drift vs. Temperature ±0.005% of F.S./°C
 Operating/Storage Temperature.....-10° to +60°C/-20° to +70°C

RANGE	INPUT	DISPLAY	PROTECTION
4-20mA	50Ω	0-1,000/10,000	50mA
1-5mA	200Ω	0-1,000/10,000	50mA
10-50mA	20Ω	0-1,000/10,000	100mA
1-5VDC	100KΩ	0-1,000/10,000	300VDC
±10VDC	100KΩ	0-1,000/10,000	300VDC

DISPLAY

LED ±3½ & 4½ 0.6"
 LED ±4½ w/Dummy Digit 0.4"
 LCD ±3½ & 4½ ALL 0.5"
 MTBF (LED) 100,000 Hours
 MTBF (LCD) 80,000 Hours

EXCITATION (COMPLIANCE)/ANALOG OUTPUTS
 (Non-isolated from digital ground)

10VDC Excitation ±1% 30mA Max.
 0-5VDC Output ±1% Accuracy, Max. Load: 5mA
 24VDC Compliance 24VDC ±10% @ 30mA Max.
 4-20mA Output ±1% Accuracy, 24VDC Compliance
 20-4mA Output ±1% Accuracy, 24VDC Compliance
 1.8mA Excitation ±1% at 24VDC Compliance

NOTE: All outputs are short circuit protected.

DIGITAL CONTROL OUTPUTS (All Positive True Logic)

Tristate Parallel BCD 10LPTTL Loads
 3-State Par, BCD Opto-Isolated 10LPTTL Loads, 1500VDC
 isolation, 20mA at 5VDC

Digital Limit Absolute comparison, 1 amp relays at 120VAC
 resistive, parallel BCD serial digit select type (multiplexed)

Thumbwheel Switches BCD w/Diodes

Peak & Hold + or - peaks, user recall/clear
 by logic or switch contact

BCD Multiplex Parallel digit BCD, serial digit
 select MSD to LSD scan

Parallel BCD with Peak & Hold is the combination of options 1 &
 3 (same specifications).

RS232/422 See Model A81-2450

POWER INPUTS

5VDC 50mA
 Display LED: 140mA; LCD Display: 20mA
 Plus Excitation option of 150mA, plus digital control output
 of 100mA. Worst case requirements (Fully Loaded): 500mA
 120VAC 100mA
 240VAC 50mA
 7-32VDC 300mA
 12VDC 300mA

ORDERING INFORMATION (11/1/00)

MODEL **2** **0** **7** **□** **□** **□** **□** **0**

DISPLAY TYPE

0 3½ LED w/Dummy Zero
 1 4½ LED
 2 4½ LED w/Dummy Zero
 3 3½ LCD w/Dummy Zero
 4 4½ LCD w/Dummy Zero
 5 3½ LED
 6 3½ LCD

INPUT RANGE

0 4-20mADC
 1 1-5mADC
 2 10-50mADC
 3 1-5VDC
 4 -10 to +10VDC

EXCITATION & ANALOG OUTPUTS

0 None
 1 10VDC & 0-5VDC
 3 24VDC & 0-5VDC
 4 None & 4-20mADC
 5 None & 20-4mADC
 7 1.8mADC & 0-5VDC

POWER INPUT

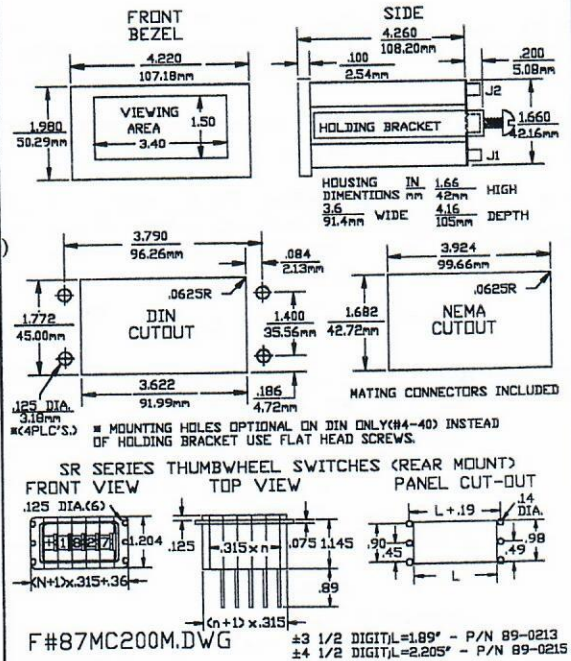
0 5VDC
 1 120VAC
 2 240VAC
 3 10VAC
 4 12VDC
 5 7-32VDC
 6 Isolated 7-32VDC

DIGITAL CONTROL OUTPUTS (1)

0 None
 1 BCD Parallel
 2 BCD Parallel Opto-Isolated
 3 Peak & Hold
 4 Digital Limit
 5 RS232C
 6 RS422
 7 .. Parallel BCD with Peak & Hold
 8 BCD Encoded
 9 BCD Encoded Optoisolated

(1) Thumbwheel Switches are available for the Digital Limit Option, Order P/N 89-0213 (±3½) or 89-0215 (±4½)

MECHANICAL



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