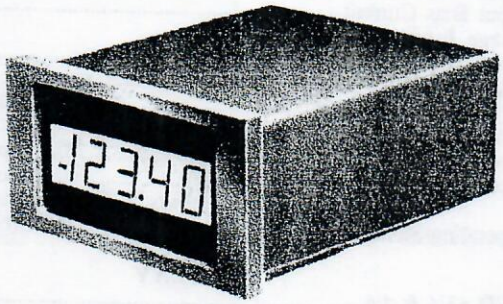
TRUE RMS AC VOLTS & AMPS INPUT DPM, 3½ & 4½ DIGIT
· RS232/422 · Peak & Hold · 3-State BCD · Digital Limit · Excitation/Compliance · Analog Output · PC Compatible

MODEL 208

LED

FEATURES
- DC to 50KHz, Sine, Triangular, SCR, Square, Pulsed, Input
- Measures Ripple on DC Level
- 1/8 DIN & NEMA Compatible Cut-Out
- 3½, 4½ Digit LED & LCD Display with/wo Dummy Digit
- 7 Power Inputs
- MTBFC: 100,000 Hours



LCD

TRUE RMS AC

DESCRIPTION: The Model 208 contains a monolithic RMS-DC converter that converts virtually any input signal to a 0-2VDC equivalent for the 4½ digit A/D. Applications of the 208 are in rectifiers, transformers, generators and more. Ripple measurement is as simple as adding a blocking capacitor in series with the "high" input. Current transformers, or shunts are directly connected.

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 ±3½, ±4½ digit LED, with or without dummy digit or its LCD high contrast low power equivalent. Dummy digit is programmable as a x10 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 en abled, 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 hysterisis 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.

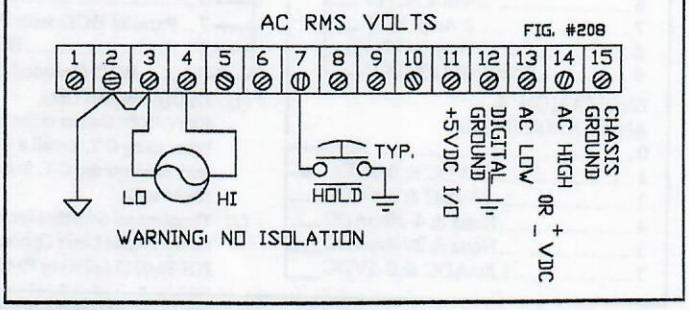
Option 9: 8-BIT ENCODED BCD OPTO-ISOLATED: Same as option 8 except it is opto-isolated to 1500VRMS. Power requirement is 5VDC at 100mA.

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.

TYPICAL CONNECTIONS



SPECIFICATIONS AT 25°C

MAINFRAME

NOTE: Input signal "low" is common to DPMs Digital ground. Isolation 1200VDC-RMS is provided to Power Input when using the built in 115/230VAC Power Supply otherwise customer to isolate input signal if needed.

Input ..... Single ended
Input Bias Current 40pA
Surge Input Protection:
50mV & 2V Range 100V
20, 200 & 500V Range 1000V
Drift vs. Temperature ..... ±0.01% of F.S. ±1 Digit
Frequency Response ..... DC to 50KHz
Accuracy & Linearity (DC-20KHz) ..... ±0.1% of F.S. ±1 Digit
Accuracy & Linearity (20-50KHz) ..... ±0.5% of F.S. ±1 Digit
for all inputs SCR and pulsed -- ±1%
Operating/Storage Temperature.....-10° to +60°C/-20° to 60°C

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 (11/100)

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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/ZINPUT
0 ..... 2VAC/10M
1 ..... 20VAC/10M
2 ..... 200VAC/10M
3 ..... 500 VAC/10M
4 ..... 2mA AC/1K
5 ..... 20mA AC/100
6 ..... 200mA AC/10
7 ..... 2 Amp AC/1
8 ..... 5 Amp AC/0.1
9 ..... 50mV AC/100M(1)

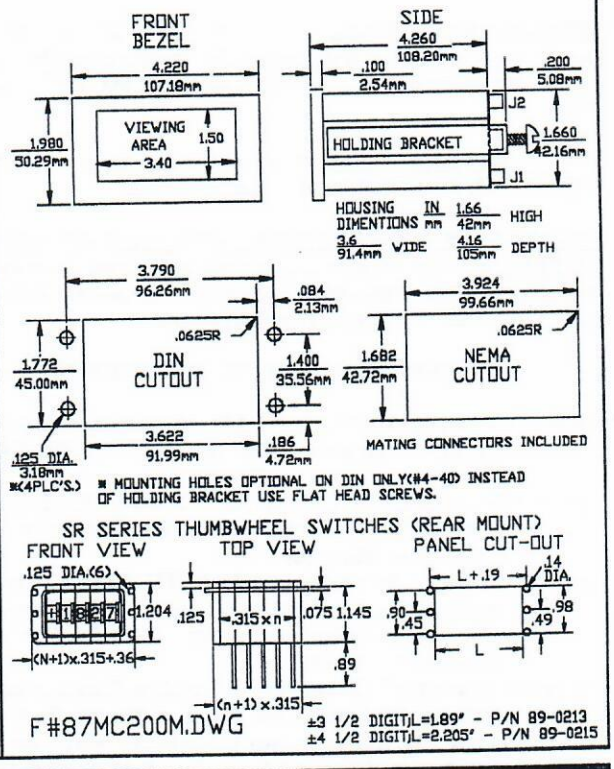
EXCITATION & ANALOG OUTPUTS
0 ..... None
1 ..... 10VDC & 0-5VDC
3 ..... 24VDC & 0-5VDC
4 ..... None & 4-20mADC
5 ..... None & 20-4mADC
7 ..... 1.8mADC & 0-5VDC

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

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

(1) 3½ Digit Models Only, 50mV=1000 Counts calibration. When using C.T. install a 0.01Ω resistor across the C.T. to develop 50mV at 5A.
(2) Thumbwheel Switches are available for the Digital Limit Option, Order P/N 89-0213 (±3½) or 89-0215 (±4½)

MECHANICAL



FAX: 520-790-2808
E-MAIL:sales@otekcorp.com
TOLL FREE: 1-877-227-6835
520-748-7900

OTEK™ CORP.
SINCE 1974

4016 E. TENNESSEE ST.
TUCSON, AZ. 85714 U.S.A.
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