VOLTS/AMPS TRUE RMS INPUT PROCESS CONTROLLER

With · Dual Alarms · Tri-State BCD· Peak & Hold · µP Compatible

MODEL 708

Features

- DC to 50KHz Response
- AC Coupled or DC Coupled
- ±4½ Digit, .6" High LED Display
- Dual Digital Limits
- Modular Construction
- ¼ DIN Package
- MTBF: 100,000 Hours

DESCRIPTION: An accurate computing technique converts the RMS Value of the signal to a DC Voltage for the A-D Converter. Sine, Triangle, Square, Pulsed, Gaussian and even SCR chopped with high crest factor are measured to accuracies not feasible before. The signal is DC Coupled; however, by adding an external capacitor in series with its "Hi" Input, the 708 will measure an AC signal riding on a DC Voltage such as ripple on DC Supplies.

I/O PORTS: Busy, Strobe, Hold, Under-range, Over-range, Lamp Test and Display Blank are included.

DIGITAL PEAK & HOLD/RECALL: This unique and optional feature allows the user, upon logical command, to set the instrument on a Peak & Hold Mode or Peak & Recall both for positive or negative signals. In the Normal Mode, the updated data is displayed and the greatest peak is displayed and compared, (only when recalled). Since the peak detector is digital, the data is retained indefinitely unless power is lost. Its frequency response is limited to the sampling rate of the instrument.

ANALOG OUTPUT: Analog output of the linearized and conditioned input signal is available. Its amplitude is 100 µV/LSD or ≈2 VDC full scale, maximum current is 1 mADC.

DUAL ALARMS: Thumbwheel switches for easy direct reading are used to set the High & Low Limits. They are of the "Two Quadrant" type since they not only compare the absolute value, but its sign as well. The three LEDs on the front panel give visual indication of the comparison. Their logic output is available at the rear connectors.

TRISTATE BCD: Tristate full parallel BCD with individual digit select "Output Disable" and common "Input Disable" for bussing purposes. Positive LPTTL Logic is standard.

ORDERING INFORMATION (1/1/97)

MODEL 7 0 8 ☐ ☐ ☐

INPUT RANGE
- 0 ..... 2VAC
- 1 ..... 2mA AC
- 2 ..... 50mVAC
- 3 ..... 20VAC
- 4 ..... 200VAC
- 5 ..... 500VAC
- 6 ..... 20mA AC
- 7 ..... 200mA AC
- 8 ..... 2Amps AC
- 9 ..... Multirange VAC

POWER/RELAYS-TRIAC
- 0 ..... 5VDC, No Relays
- 1 ..... 5VDC, w/Relays
- 2 ..... 12VDC, No Relays
- 3 ..... 12VDC, w/Relays
- 4 .... 120/240VAC, No Relays
- 5 ..... 120/240VAC, w/Relays
- 6 ..... 5VDC w/Triacs
- 7 ..... 12VDC w/Triacs
- 8 ..... 120/240VAC w/Triacs

PEAK & HOLD
- 0 ..... No Peak & Hold
- 1 ..... Peak & Hold

DECIMAL POINTS: Switch controlled decimal points are accessible from the front panel.

FULL SCALE: Full scale adjustment (12 Turn) allows user to scale the reading from the front panel.

POWER: Choice of 5VDC, 12VDC or 120/240VAC Input. When 120/240 VAC Power Supply is ordered, its primary to secondary isolation is 1200VDC or RMS and it can supply the following for external use: +5VDC ±5% at 20mA and -5VDC ±5% at 5mA. Input is 120/240VAC ±10% selectable.

CASE: Conforms to DIN Standard. Fabricated of extruded anodized aluminum.

RELAYS OR OPTIO-ISOLATED TRIACS: 2 each 100mA at 120VAC Resistive Load is available They are driven from the "Low" and"High" Logic Outputs of the Digital Limits and are SPST N.O. (normally open). N.C. (normally closed) available on request.

SPECIFICATIONS AT 25°C

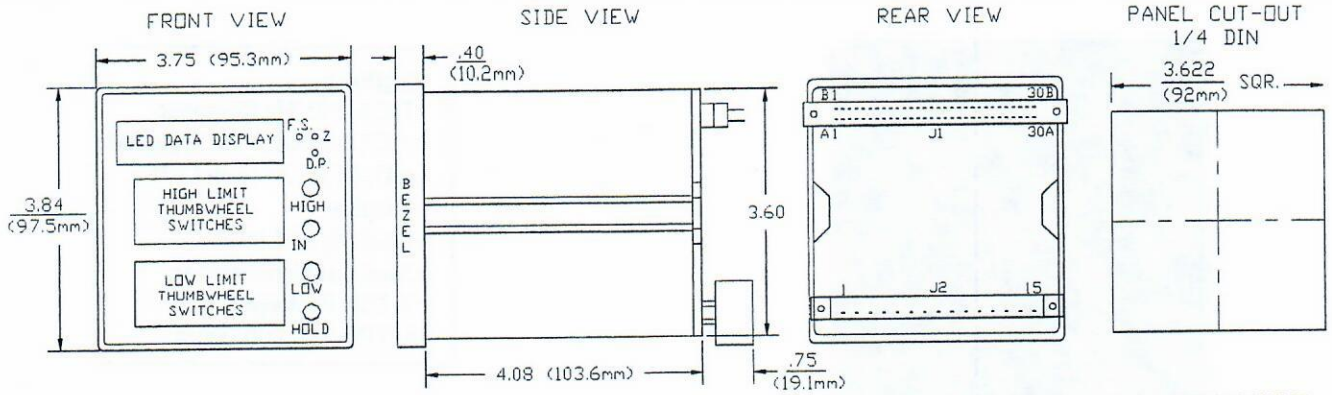
Zero	Adjustable
Accuracy (Sine Wave) DC-20KHz	±0.5% F.S.
Accuracy (Sine Wave)20-50KHz	±1.0% F.S.
Additional Error for Crest Factor of 2	0.5%
Additional Error for Crest Factor of 7	-1%
Input Impedance	100M/2V; 10M/Others
Overvoltage	50mV-2V Ranges/50V
	20V-500V Range/500V
Noise Rejection	60dB at 50/60Hz Typical
Zero & Span Adjustments	±2500 Counts
Temperature Coefficient	±50 PPM/°C
Sample Rate	3/Sec Nominal, 20 Maximum (Specials)
Overload Indication	Display Flashes
Display	±1.9.9.9.9. 0.6" LED Red
Power Requirement	300 mA at 5VDC
Humidity	To 60% RH Std. to 90% special
3T BCD Outputs	6LPTTL
3T BCD Inputs	1 LPTTL
F.S. Adjustment	±2500 Counts
Zero & Polarity	Automatic
Operating/Storage Temperature	-10° to +60°C/-20° to +70°C

WARNING:

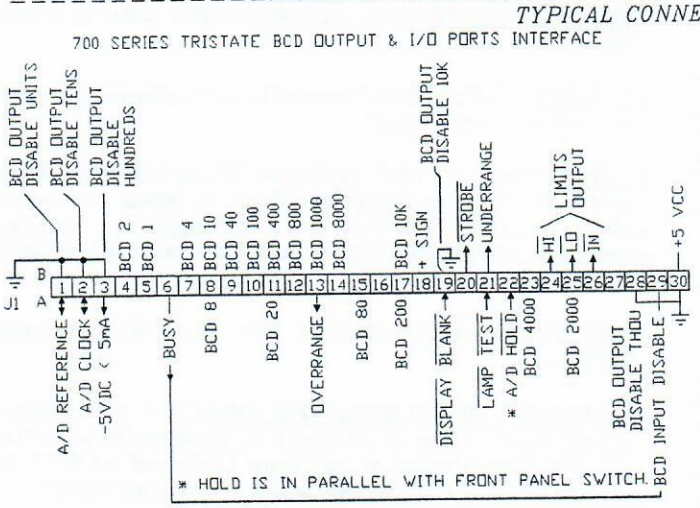
No isolation exists between Signal Inputs and Logic Outputs for Power Inputs. Customer to isolate, if required when using the built-in power supply (120/240VAC). The isolation is 1200VDC between power input and signal common & digital ground.

TRUE RMS AC

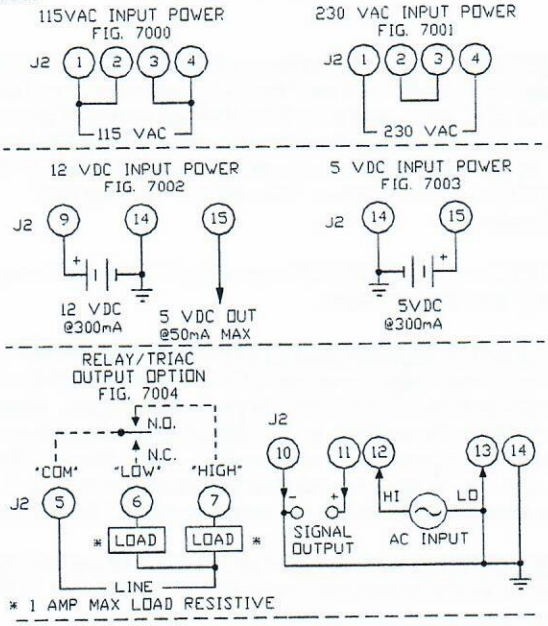
708 MECHANICALS & TYPICAL CONNECTIONS

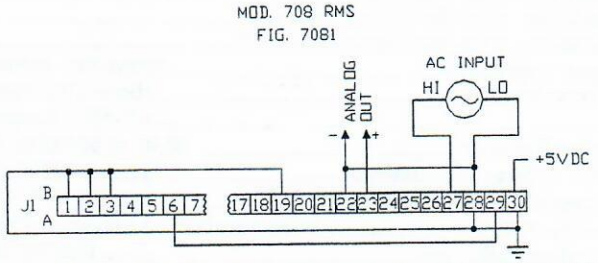


TYPICAL CONNECTIONS



NOTES: INPUT DISABLE: CONTROLS BCD OUTPUT AND LIMITS OPERATION, RETAINS LAST READING WHEN AT 5VDC, FREE RUNS WHEN AT GROUND.
OUTPUT DISABLE: MUST BE AT GROUND FOR PARALLEL OUTPUT AND LIMITS OPERATION.





WARNING: ALL TERMINALS ARE REFERENCED TO DIGITAL GROUND WHICH MIGHT BE "HOT" IF INPUT SIGNAL IS NOT ISOLATED.

F#87MC708.DWG

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