

MODEL 606

HI-REL $\pm 4\frac{1}{2}$ DIGIT μ P COMPATIBLE DPM With Instrumentation Amplifier

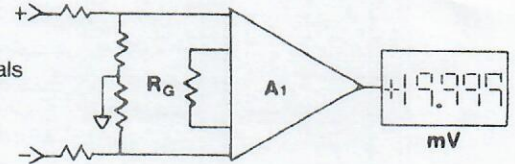


FEATURES *DIFFERENTIAL*

- ± 5 V CMV Range
- ~~1000M-Zin~~ *100K*
- ~~Programmable Gain~~
- Resolution to 10μ V
- Mux or Parallel "3T" BCD
- Run, Hold, Strobe, Busy and Blank Signals
- True Ratiometric
- Differential or Single Ended
- Flashing Display for Overrange
- ~~±10Vdc @ 5mA Available~~
- 150 Hour Burn-in Plus 3-100% Tests
- MTBF of 50,000 Hours (calculated)
- Field Failure Rate Below 0.3%



BLOCK DIAGRAM



DESCRIPTION

Model 606 is the first DPM designed for use with μ P's. Low level signal/power/current requirements are compatible with μ P Systems and use of LSI Monolithic Component Technology increases reliability and efficiency. Latest LSI Design also makes the Series 606 and its options easily interfaced with UART's and transducers as well as conventional solid state devices. Refer to Model 600 Main Frame for additional information.

Instrumentation Differential Amplifier Input

Fet Input Instrumentation Amplifier with internal programmable gain to 100, low bias current of only $\cdot 3$ PA, input protected against high voltage transients, low noise current of less than $0.01/pA$ RMS, Nonlinearity of less than 0.01%, CMRR of 110dB, minimum guaranteed CMV of ± 5 V, Internal Offset adjust.

SPECIFICATIONS AT 25°C

Input	
Type	Differential/Single Ended
Input Impedance	1000M <i>100K</i>
Sample Rate	3/Sec. Std., Others on Request
Bias Current	40nA Typical
Noise Rejection	90dB @ 50/60Hz Typical
CMRR	110dB Typical
CMV	1200V RMS (AC Power)
CMV	± 5 V DC
Power	5Vdc $\pm 5\%$ @ 300mA

Accuracy and Linearity

Of Full Scale	$\pm 0.01\% \pm 1$ Digit
Temperature Coefficient	± 50 PPM/ $^{\circ}$ C
Total Error	$\pm 0.02\% \pm 1$ Digit
Warmup	1 Minute

Outputs

Display	LED, Bright Red. 5" (13mm) High
Decimal Point	Externally Selectable
Overload	Display Flashes
BCD Data & Control	One TTL Load (Inputs & Outputs)
3T BCD	5 TTL Loads

Temperature

Operating	0° C to $+60^{\circ}$ C
Storage	-20° C to $+80^{\circ}$ C

TERMINAL DESCRIPTION

Bottom Row: 6A + Signal Input, 7A - Signal Input; 4A External Reference (optional) for Ratiometric, 0.1 to 2V Range; 8A Lamp Test; 9A Display Blank; connect to 18B to enable; 11A Strobe, five negative pulses at EOC, one for each D.S. 5μ S wide; 12A Busy, High during Conversion, Low during Auto Zero 10mS Wide; 16A D.P. connect to appropriate D.S. to light desired D.P.

Top Row: 1B + 5Vdc Input; 2B Reading Hold, Open for normal operation, connect to 18B to hold, a positive pulse over 300nS will command the 606 to make one single conversion; 3B Sign, Low for Negative Reading, High for Positive Reading; 4B Underrange normally Low goes High when reading is less than 9% of F.S. (1800 counts); 5B Overrange, normally Low, goes High when reading exceeds 19999 counts (F.S.); 6-9 B1, 2, 4, 8 BCD Output Positive Logic 1 LPTTL Load max. (400 μ A Sink); 10-14B Digit Selects, DS1 is LSD, DS5 is MSD 1LPTTL Load max.; (400 μ A Sink); 17B and 18B Digital Ground.

OPTIONS

115/230 Vac. 47-400Hz Internal Power Supply with 1200 Vac Isolation, $\pm 10\%$ Input; 5Vdc $\pm 5\%$ at 400mA Output. See Main Frame for connections.

"3 State" Parallel. Buffered BCD when ordered occupies the place of the Power Supply. External connections must be made by customer to connect the MUX BCD from lower connector to top connector. Pin 1B "Input Disable" when grounded will allow input data to be transferred to latches; when at Vcc, will prevent data from being transferred. It can be connected to Pin 12A (Busy) of lower connector for auto transfer.

2B "Output Disable" normally at Logic "O"; when at Logic 1 (Vcc), it will force all outputs to a high output impedance state (3T) facilitating busing 3B thru 14B, 17B, 18B and 1A-4A Parallel BCD Output, 5A-8A MUX BCD Input, 9A-13A Digit Selects; 14A + Sign Input; 16A Vcc (+5Vdc); 18A Ground.

External Power Pack. Refer to page 45.

ORDERING INFORMATION

MODEL 606 X X X

Range (F.S.)

0	... 200.00mV
1	... 2V
2	... 20V
3	... 200V
4	... 1000V
5	... 200.00 μ A
6	... 2mA
7	... 20mA
8	... 200mA

Options

0	... 5Vdc Power Req'd
1	... 115/230AC Power
2	... "3T" BCD & 5V DC
3	... "3T" BCD & Open Frame
4	... "3T" BCD & Power Pack
0	... Standard

