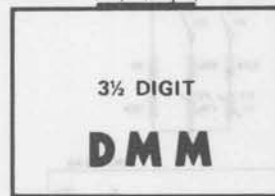


the ONE page
APPLICATION IDEA FROM **MOTOROLA**



The application shown here is an auto-ranging DMM for measuring voltages, currents, resistances and temperatures. The features are:

Voltage

AC or Bipolar DC	up to 19,99 V	} Three scale auto-ranging
	20,0 V to 199,9 V	
	200 V to 1000 V	

Current

AC or Bipolar DC up to 1999 mA (Drop Voltage max. 0,36 V)

Resistance

	up to 1,999 K Ω	} Three scale auto-ranging
	2 K Ω to 19,99 K Ω	
	20 K Ω to 199,9 K Ω	

Temperature

-10 °C to +100,0 °C (Transistor Sensor)

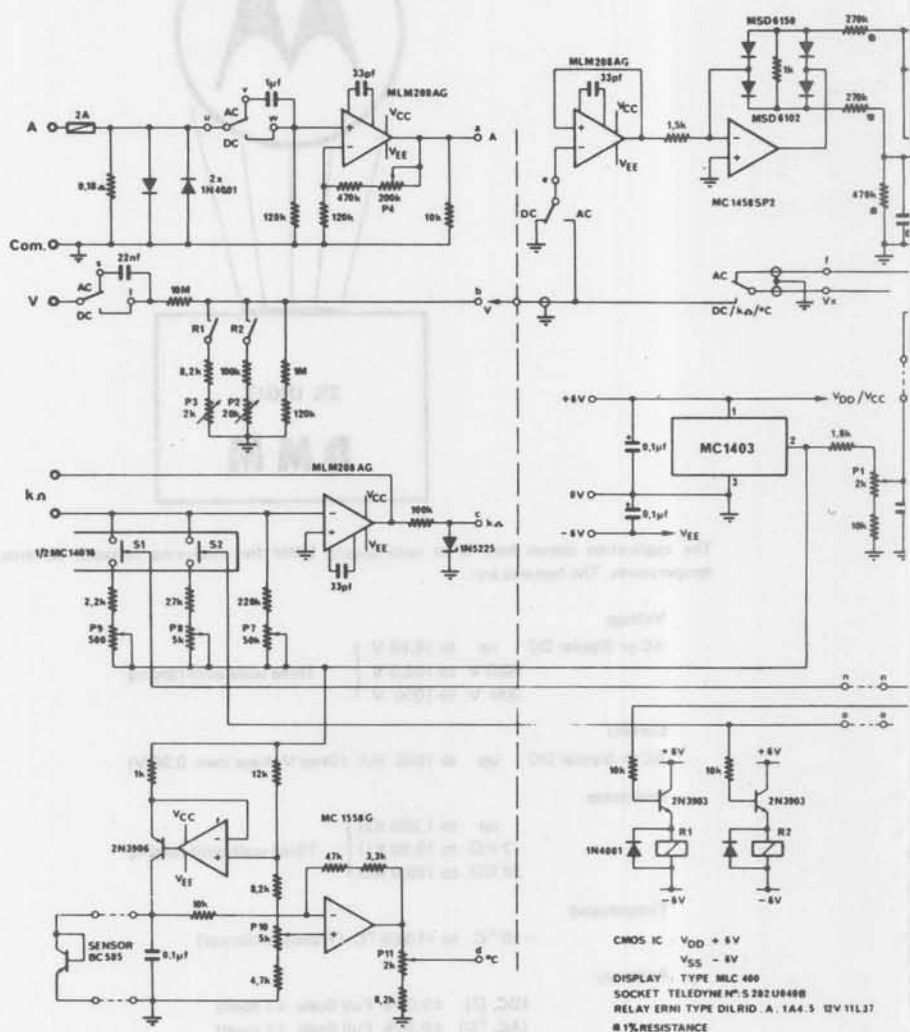
Accuracy

(DC, Ω) $\pm 0,05\%$ Full Scale ± 1 count
(AC, °C) $\pm 0,25\%$ Full Scale ± 1 count

Display UP-dating (HOLD)

Flashing display when input is Over-Range

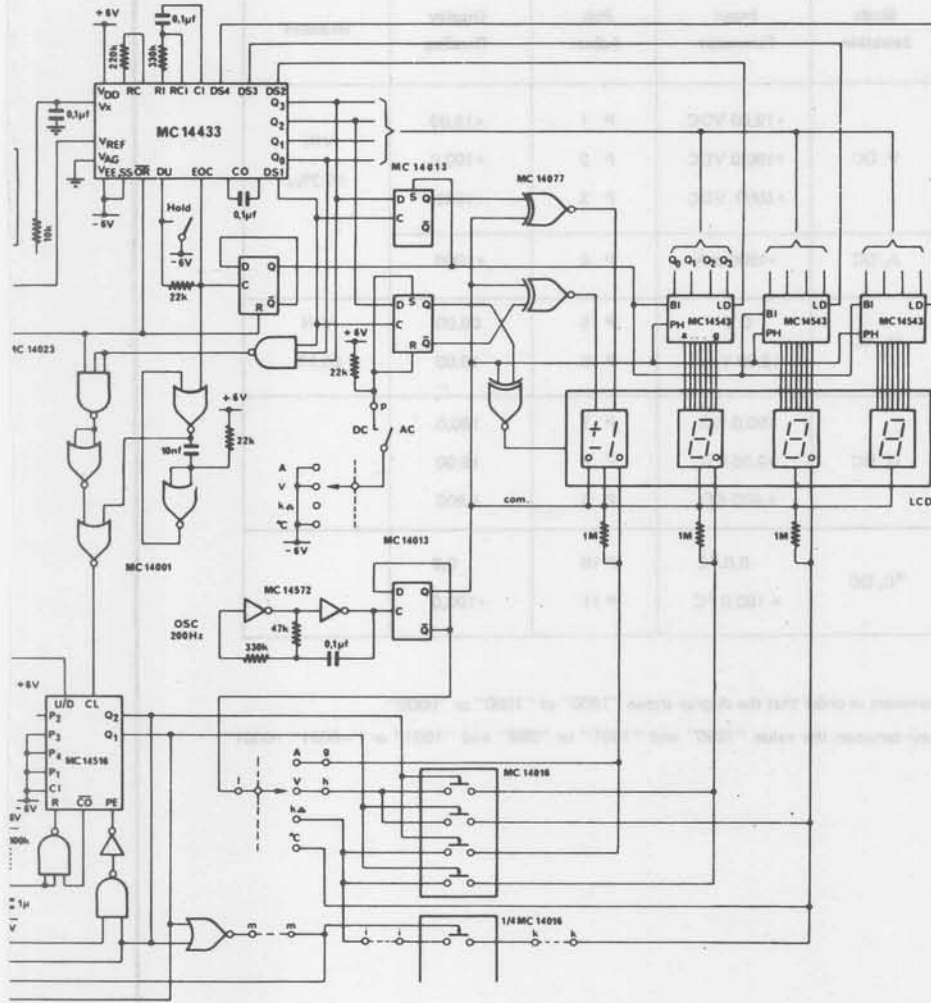
Low Consumption max. 200 mW



CMOS IC $V_{DD} + 6V$
 $V_{SS} - 6V$
 DISPLAY TYPE MILC 600
 SOCKET TELEDYNE N° 5282 U848B
 RELAY ERNI TYPE DILRID . A . 1A4 . 5 12V 11L37
 R 1% RESISTANCE

3 1/2 DIGIT MUL

3



V.A.Ω. °C.

CALIBRATION PROCEDURE

Condition Step	Mode Selection	Input Parameter	Pot. Adjust	Display Reading	Remarks
1	V, DC	+19,00 VDC	P 1	+19,00	VIN ±0,2‰
2		+190,0 VDC	P 2	+190,0	
3		+1000 VDC	P 3	+1000	
4	A, DC	+1900 mA	P 4	+1900	
5	V, AC	0 V	P 5	00,00	VIN ±0,1%
6		19,00 VAC	P 6	19,00	
7	Ω, DC	190,0 KΩ	P 7	190,0	
8		19,00 KΩ	P 8	19,00	
9		1,900 KΩ	P 9	1,900	
10	°C, DC	0,0 °C	P 10	0,0	
11		+ 100,0 °C	P 11	+100,0	

Adjust the potentiometers in order that the display shows "1900" or "1000" or "0000".

This occurs mid-way between the value "1899" and "1901" or "999" and "1001" or "-0001" +0001".