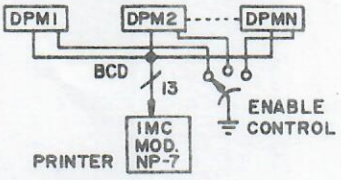
MODEL 308

HI-REL ±3½ DIGIT METER RELAY WITH "3T" BCD OUTPUT

FEATURES

- 1uS Comparison Logic
- 1mS Comparison Relay
- MTBF > 40000 Hrs.
- 10uV Resolution
- 1000V F.S. Range
- Field Returns <0.7%
- Optional Dummy Zero

DATA SWITCHING WITH IMC'S TRISTATED BCD DPMS



DESCRIPTION

The 308 is a self contained digital meter relay requiring external 5Vdc Power Supply and External Limit Programming by means of Parallel TTL Compatible BCD or BCD Thumbwheel Switches for Alterable Limits or jumpers for Fixed Limit.

When the 308 is ordered, it contains the 300 Main Frame and Tristate Parallel BCD Output which is externally routed (by the customer) to the top connector which includes the BCD Comparator. This BCD can also be used for other purposes having capabilities to drive 3TTL Loads.

Logic Outputs for "Greater", "Equal" and "Lower" states of the comparator are available at the connector in addition to a SPDT Reed Relay Output (5 W Resistive) which is factory wired for "Greater" State. meaning that the relay will operate when the reading is greater than the setting. "Equal" and "Lower" Relay operation are available on request. The comparison is made of the full 14 Bit Data including sign. This is known as **4 Quadrant** Comparison.

SPECIFICATIONS @25°C

reater, Equal, Lower Outputs	5 TTL Loads
BCD Output	3 TTL Loads
Relay Output (SPDT)	5W Resistive
Polarity	Fully Bipolar
Input Impedance	Greater than 1000 Meg Ohms (See Options)
Bias Current	Less than 5 pA
Common Mode Rejection	90dB @ dc, 60dB @ 50/60 Hz
Zero	Automatic
Display	0.5", High LED RED
Overange Indication	4/Second Flashing Display
Overload Protection	To 1200 Vdc/AC Voltage Range
Accuracy & Linearity	±0.05% ±1 Digit
Sample Rate	4 per Second Nominal
Step Response	100mS from Zero to Full Scale
Temperature Coefficient	30 Parts per Million
Full Scale Adjustment	25 Turn ±20% Adjustment
Power Requirements	5Vdc ±5% @ 400mA
Operating Temperature	−10°C to +60°C
Storage Temperature	−25°C to +85°C

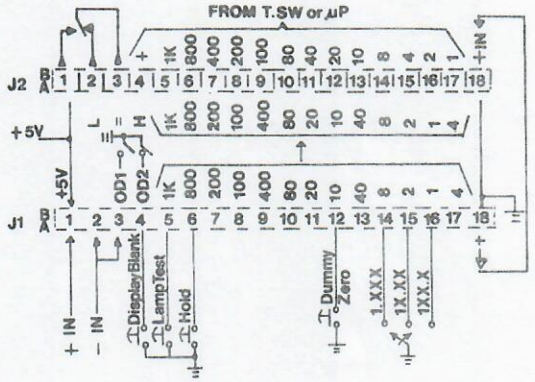
TERMINAL DESCRIPTION

J1 Connector (Bottom)
1B (Top) +5Vdc Input; 18B, Digital Ground (5V Return) 1A (Bottom) + Signal Input; 2A − Signal Input (connected internally to 18B). **Do Not** allow power currents to flow on this line or **Offsets** (Ground Loops) **will** occur.

4A, Display Blank; 5A, Lamp Test; 6A, Display Hold (optional); 13A, −12Vdc out 5mA max.; 14A, 1XX.X D.P.; 15A, 1X.XX D.P.; 16A, 1.XXX D.P. (connect to 18B to Light Up); 17A, +12Vdc out 5mA max.; 18A, Sign Out (Low for +, High for −).

Pins 3 and 4B, OD1 and OD2 connect to Ground (18A) for normal operation, connect +5V to force the BCD Output to Hi Z State. 5B thru 17B, BCD out as per label. **Note:** Sign 18A is not tristated.

J2 Connector (Top)
1A +5Vdc; 2, 3 and 4A Logic Output; 5-17A and 18B BCD Input from "3T" BCD on J1; 18A Digital Ground; 1-3B Relay Contact Output 5W Resistive Switching max.; 4-17B BCD Positive Logic from TTL or BCD Thumbwheel Switches such as IMC's (see page 45).



ORDERING INFORMATION

MODEL 308 X X X

INPUT RANGE SPECIFICATIONS

	F.S. Input	Resolution	Input Impedance	Accuracy
$	*±20.00mV	10u Volts	1000 Megohms	±0.1%
0	±200mV	100u Volts	1000 Megohms	±0.05%
1	±2.000V	1m Volt	1000 Megohms	±0.05%
2	±20.00V	10m Volt	10 Megohms	±0.05%
3	±200.0V	100m Volt	10 Megohms	±0.05%
4	±1000V	1 Volt	10 Megohms	±0.05%
5	±200.0uA	100nA	1000 Ohms	±0.05%
6	±2.000mA	1uA	100 Ohms	±0.05%
7	±20.00mA	10uA	10 Ohms	±0.05%
8	±200.0mA	100uA	1 Ohm	±0.05%
9	±50mV	1 count	1000 Megohms	±0.1%

*This range not available with built-in Power Supply, see page 45 for External P.S. & Thumbwheel Switches

External Power

0 ... 5Vdc Req'd
1 ... External Open Frame
2 ... External Power Pack

Display

0 ... Standard
1 ... Dummy Zero

Note: 50mV range is factory scale to read 1000 counts at 50mV for standard current shunts. Other scalings available.

Note: Connectors are included with instrument.