



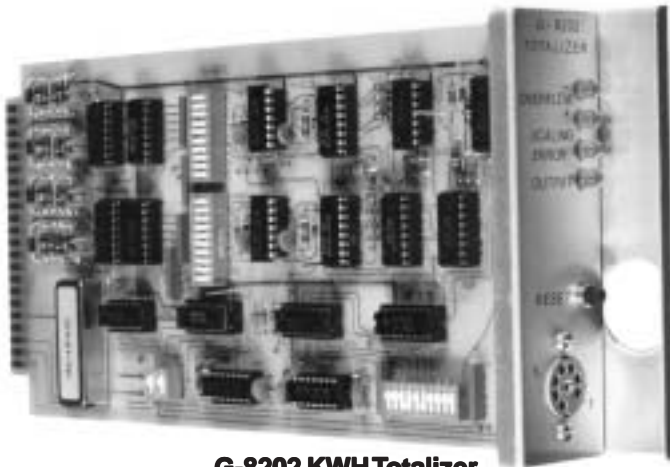
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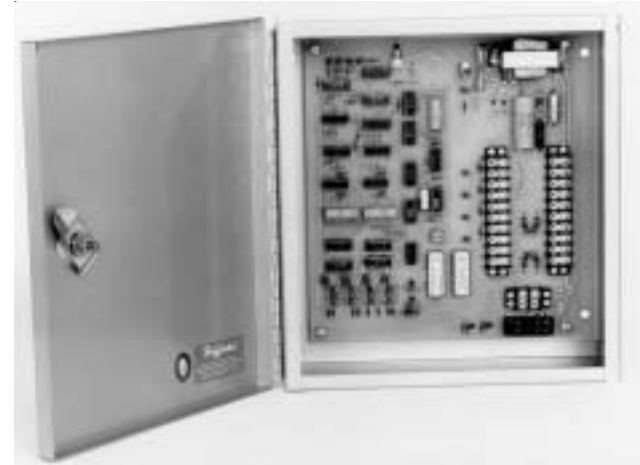
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G-8202 KWHR TOTALIZER



G-8202 KWH Totalizer



G-8202-N KWH Totalizer

GENERAL INFORMATION

Pulse devices are used in watt-hour and varhour meters by power companies and industry to provide pulses that are proportional to the revolutions of the meter disc. These pulses are used for billing purposes as well as load management programs. The power companies record the number of pulses and bill the customer according to the total recorded and times of day that pulses occurred. Large industrial users of power can use these pulses as inputs to computers for load management programs. The pulse device in a watt-hour meter has one set of form C contacts. If additional contacts are needed for local use or transmission, The Da-Tel model G-1994 relay is used to obtain three output circuits from one watt-hour meter circuit.

The Model G-8202 KWH totalizer is a third generation design, including the merits of the previous two designs. Simple sequential logic is used to combine the input pulses from two, three or four different KWH or KVH circuits. The output, a mercury wetted latching relay (from

C), then drives the recording equipment to meter total energy and coincident demand. The inputs have switch selectable scaling (divide 1, 2, 4, 8 or 16) as does the output. The four inputs may all be added of the third and/or fourth input may be subtracted (switch selectable) from the total output.

Inputs are three wire circuits, KYZ, filters to insure noise immunity and sampled to ensure a true transition. The output relay, mercury wetted, is protected with arc suppression. On the pc board, the relay may be mounted as required for standard G-6894 Card rack application or shifted 90 degrees to allow in the G-8014B Relay Panel Cabinet.

The input pulses may be simultaneous, overlap or at any time period apart. A pulse stream is created internally for each transition or open/close on the inputs. Input pulse rates need not be considered since the digital circuitry will accept input rates up to 3000 PPM. The output pulse rate, however, needs to be set (switch

selectable) so that the total input rate of all four does not exceed the output pulse rate. Switch selection (S4) allows the following output pulse rate choices: 380 PPM, 190 PPM, 95 PPM, 47.5 PPM or 23 PPM.

For example, if P1 and P2 were 100 PPM, P3 was 200 PPM and P4 subtractive at 50 PPM, the output rate would have to be set at 380 PPM. The input pulse rates in the above example are the rates after the input scaling is done (divide 1, 2, 4, 8, or 16). Output scaling (divide 1, 2, 4, 8, or 16) simply divided the output pulses and the output pulse rate at the output, not internally.

In the above example, if the output pulse rate (S4) was incorrectly set at 190 PPM, excess positive pulses would accumulate in the internal counter. When the internal counter accumulates 16 counts, positive or negative, a flashing scaling error LED indicates the condition. If for some abnormal system condition, excessive positive or negative counts accumulate, the internal counter will handle 255 counts, positive or negative. When 256 counts occur, a positive or negative error LED latches on until reset to indicate the overflow. This results in the loss of the 255 counts.

G-8202-N KWH Totalizer

The G-8202-N KWH Totalizer is identical circuit of the G-8202 except for the physical mounting and optional outputs. The G-8202-N is mounted in a NEMA 1 cabinet (12"HX10"WX4"D) and includes AC-DC power supply and screw terminals for input and output. As an option a second output is available (mercury wetted relay or optically isolated Triac KYZ). Also the card can accommodate the G-7007-S FSK transmitter to interface with a communication circuit if required as an option.

SPECIFICATIONS

Power Supply: G-8202 = +12VDC, 25mA or +5VDC, 10mA.

G-8202-N = 115VAC, 60 Hz.

Operating Temperature: -30 to +70 degrees c.

Inputs: 4 KYZ isolated contacts.

Input Rate: 3000 PPM maximum.

Outputs: G-8202 = 1 KYZ contact with arc suppression, with +12 VDC power supply, 1 digital output, pulse or transition.

G-8202-N = 2KYZ contacts with arc suppression, second set optional.

Output Rates: Switch selectable = 375 P/M, 187 P/M, 94P/M, 47 P/M 23 P/M +/-5%.

Input and Output Scaling: Switch selectable = divide 1, 2, 4, 8 and 16.

**Equipment and/or components purchased through Da-Tel but manufactured by other companies are covered under the warranties of those manufacturers.*

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NOTICE

As of the date of this printing, the specifications for the G-8202 in this Instruction Information sheet apply to all G-8202, except as indicated. Because all Da-Tel products are continually being refined and improved, these specifications are subject to change without notice.