Time	Flow Rate	Desired Freq.	m*x*p	Frac Pulses	Output State
0.00s	100g/s	10Hz	0.5	0+0.5 ≥ 0	Low
0.05s				0+0.5 ≥ 0	High
0.10s				0+0.5 ≥ 0	Low
0.15s				0+0.5 ≥ 0	High
0.95s				0+0.5 ≥ 0	High
1.00s	8 g/s	0.8Hz	0.04	0+0.04 ≥ .04	High
1.05s				.04+.04 ≥ .08	High
1.10s				.08+.04 ≥ .12	High
1.15s				.12+.04 ≥ .16	High
1.55s				.44+.04 ≥ .48	High
1.60s				.48+.04 ≥ .02	Low
1.65s				.02+.04 ≥ .06	Low
1.95s				.26+.04 ≥ .30	Low
2.00s	50 g/s	5Hz	0.25	.30+.25 ≥ .05	High
2.05s				.05+.25 ≥ .30	High
2.10s				.30+.25 ≥ .05	Low
2.15s				.05+.25 ≥ .30	Low
2.20s				.30+.25 ≥ .05	High

As an example of a fractional pulse (FP), the “remainder” of the 0.8 Hz that was not put out in the second period (T= 1-2 sec) is kept track of in the third period (T= 2-3 sec) via the “0.30” value in the accumulator. Used as an initial value in the (T= 2-3 sec), “0.30” is the amount left over at 1.95 seconds.

Also, as shown in the above table and FIG. 3, the time between transitions (where the output state remains either low or high) is the period of the desired output frequency.

By utilizing the period of the desired output frequency, a flow meter can measure an instantaneous flow rate. For instance, for an example output period, using the equation: T (sec) = 1/f (Hz) and the frequency per rate (x), the instantaneous flow rate can be determined by the following equation: instantaneous flow rate (g/s) = desired frequency (Hz) / frequency per rate (x).

Moreover, the total integrated flow rate may also be determined by counting the number of toggled output states and taking into account the frequency per rate (x). For example, in FIG. 3, in the first period (T= 0-1 sec), 10 toggled output states multiplied by the frequency per rate (x) of 0.1 = 100 grams/sec of total integrated flow.