

Resolution table for RM4-WT

Effective Resolution (Bits) RM4-WT Over Full Scale

Samples/ Second	mV/V Input						
	0.5	1.0	2.5	5.0	10.0	25.0	50 or 100
5	15.5	16.5	17.5	18.5	19.5	20.5	20.5
10	15.5	16.5	17.5	18.5	19.0	19.0	19.0
15	15.5	16.5	17.5	18.5	18.5	19.0	19.0
20	15.5	16.5	17.5	18.0	18.5	18.5	18.5
30	15.5	16.5	17.5	18.0	18.5	18.5	18.5
50	15.0	16.0	16.5	17.0	17.5	17.5	17.5
100	14.0	14.0	14.5	14.5	15.0	15.0	14.5

Note: Figures in the table above apply when the digital filter setting is 0. Add 0.5 bits effective resolution for each step on the digital filter setting e.g. if the digital filter is set at 4 add 2 bits of effective resolution to each of the figures in the table above.

Resolution in μV can be calculated using the resolution in bits figures above.

These μV resolution values are calculated by the following method:

Resolution (μV) = full signal input voltage range / number of divisions of resolution.

e.g. for 2.5mV/V range, 10V excitation, full signal input voltage is 2.5mV x 10V excitation = 25mV.

For 14.5 bits (100 samples/sec, zero filter) the number of divisions is 214.5 which equals 23170 divisions.

For 21.5 bits (5 to 30 samples/sec, filter setting of 8) the number of divisions is 2965820 (221.5).

Resolution (μV) at 14.5 bits = $(2.5 \text{ mV} \times 10) / 23170 = 1.08\mu\text{V}$

Resolution (μV) at 21.5 bits = $(2.5 \text{ mV} \times 10) / 2965820 = 0.0084\mu\text{V}$