

Heading, Degrees	Hdg, Dir	Resistance	Voltage (Vcc=5V, r=10k)	Voltage (Vcc=3.3V, r=10K, 50mV droop)
0.0	N	33.00E+03	3.84	2.494
22.5	NNE	6.57E+03	1.98	1.289
45.0	NE	8.20E+03	2.25	1.464
67.5	ENE	891.00E+00	0.41	0.266
90.0	E	1.00E+03	0.45	0.295
112.5	ESE	688.00E+00	0.32	0.209
135.0	SE	2.20E+03	0.90	0.586
157.5	SSE	1.41E+03	0.62	0.402
180.0	S	3.90E+03	1.40	0.912
202.5	SSW	3.14E+03	1.19	0.777
225.0	SW	16.00E+03	3.08	2.000
247.5	WSW	14.12E+03	2.93	1.903
270.0	W	120.00E+03	4.62	3.000
292.5	WNW	42.12E+03	4.04	2.626
315.0	NW	64.90E+03	4.33	2.816
337.5	NNW	21.88E+03	3.43	2.231

ESP32 ADC value (calc.)	-2.00%	2.00%
3096	3034	3158
1599	1567	1631
1817	1781	1854
330	323	337
367	359	374
260	254	265
727	713	742
498	489	508
1132	1109	1154
964	945	983
2482	2433	2532
2361	2314	2409
3724	3649	3798
3260	3195	3325
3495	3425	3565
2769	2713	2824

$$V_{out} = V_{cc} * (R1 / (R1 + R2))$$

$$ADCnum = (V_{out} / 3.3) * 2^{adc_bits}$$

check these out:

<https://github.com/e-tinkers/esp32-adc-calibrate>

https://docs.espressif.com/projects/esp-idf/en/stable/esp32/api-reference/peripherals/adc_calibration.html

font for LCD

