

THE MEASURABLE DIFFERENCE.



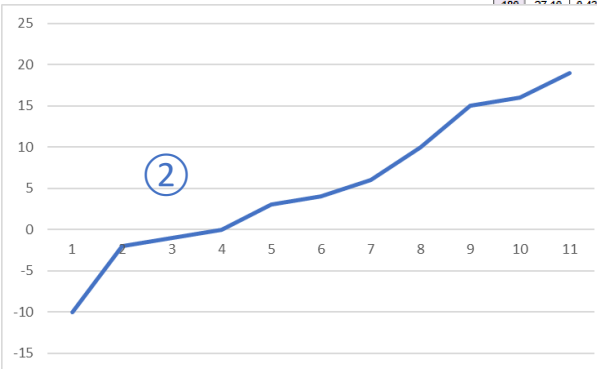
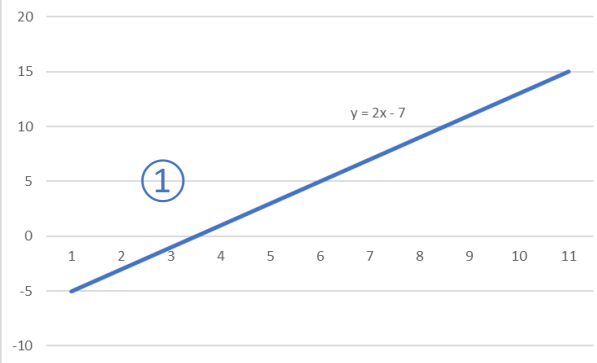
DEWETRON

OXYGEN TRAINING > TABLE SCALING



PURPOSE

- ① Most sensors have a linear scaling from measured value to engineering unit, i.e. 20 A = 2 V or 96.58 mV/g
- ② Some sensors, like pressure sensors or temperature have a nonlinear scaling from measured value to engineering unit; To convert the measured signal correctly to its engineering unit, a table scaling is required



°C	Ohm	Diff.	°C	Ohm	Diff.	°C	Ohm	Diff.	°C	Ohm	Diff.	°C	Ohm	Diff.
140	43.88	0.42	-80	68.33	0.41	-20	92.16	0.39	±0	100.00	0.39	+60	123.24	0.38
139	44.29	0.41	79	68.73	0.40	19	92.55	0.39	+1	100.39	0.39	61	123.62	0.38
138	44.71	0.42	78	69.13	0.40	18	92.95	0.40	2	100.78	0.39	62	124.01	0.39
137	45.12	0.41	77	69.53	0.40	17	93.34	0.39	3	101.17	0.39	63	124.39	0.38
136	45.53	0.41	76	69.93	0.40	16	93.73	0.39	4	101.56	0.39	64	124.77	0.38
135	45.95	0.42	75	70.33	0.40	15	94.12	0.39	5	101.95	0.39	65	125.17	0.40
134	46.35	0.40	74	70.73	0.40	14	94.52	0.40	6	102.34	0.39	66	125.55	0.38
133	46.76	0.41	73	71.13	0.40	13	94.91	0.39	7	102.73	0.39	67	125.93	0.38
132	47.18	0.42	72	71.53	0.40	12	95.30	0.39	8	103.12	0.39	68	126.32	0.39
131	47.59	0.41	71	71.93	0.40	11	95.69	0.39	9	103.51	0.39	69	126.70	0.38
130	48.00	0.41	70	72.33	0.40	10	96.09	0.40	10	103.90	0.39	70	127.08	0.38
129	48.41	0.41	69	72.73	0.40	9	96.48	0.39	11	104.29	0.39	71	127.46	0.38
128	48.82	0.41	68	73.13	0.40	8	96.87	0.39	12	104.68	0.39	72	127.85	0.39
127	49.23	0.41	67	73.53	0.40	7	97.26	0.39	13	105.07	0.39	73	128.23	0.38
126	49.64	0.41	66	73.93	0.40	6	97.65	0.39	14	105.46	0.39	74	128.61	0.38
125	50.06	0.42	65	74.33	0.40	5	98.04	0.39	15	105.85	0.39	75	128.99	0.38
124	50.47	0.41	64	74.73	0.40	4	98.44	0.40	16	106.24	0.39	76	129.38	0.39
123	50.88	0.41	63	75.13	0.40	3	98.83	0.39	17	106.63	0.39	77	129.76	0.38
122	51.29	0.41	62	75.53	0.40	2	99.22	0.39	18	107.02	0.39	78	130.14	0.38
121	51.70	0.41	61	75.93	0.40	1	99.61	0.39	19	107.40	0.38	79	130.52	0.38
120	52.11	0.41	60	76.33	0.40				20	107.79	0.39	80	130.90	0.38
119	52.52	0.41	59	76.73	0.40				21	108.18	0.39	81	131.28	0.38
118	52.92	0.40	58	77.13	0.40				22	108.57	0.39	82	131.67	0.39
117	53.33	0.41	57	77.52	0.39				23	108.96	0.39	83	132.05	0.38
116	53.74	0.41	56	77.92	0.40				24	109.35	0.39	84	132.43	0.38
115	54.15	0.41	55	78.32	0.40				25	109.73	0.38	85	132.81	0.38
114	54.56	0.41	54	78.72	0.40				26	110.12	0.39	86	133.19	0.38
113	54.97	0.41	53	79.11	0.39				27	110.51	0.39	87	133.57	0.38
112	55.38	0.41	52	79.51	0.40				28	110.90	0.39	88	133.95	0.38
111	55.78	0.40	51	79.91	0.40				29	111.28	0.38	89	134.33	0.38
110	56.19	0.41	50	80.31	0.40				30	111.67	0.39	90	134.71	0.38
109	56.60	0.41	49	80.70	0.39				31	112.06	0.39	91	135.09	0.38
108	57.00	0.40	48	81.10	0.40				32	112.45	0.39	92	135.47	0.38
107	57.41	0.41	47	81.50	0.40				33	112.83	0.38	93	135.85	0.38
106	57.82	0.41	46	81.89	0.39				34	113.22	0.39	94	136.23	0.38
105	58.22	0.40	45	82.29	0.40				35	113.61	0.39	95	136.61	0.38
104	58.63	0.41	44	82.69	0.40				36	113.99	0.38	96	136.99	0.38
103	59.04	0.41	43	83.08	0.39				37	114.38	0.39	97	137.37	0.38
102	59.44	0.40	42	83.48	0.40				38	114.77	0.39	98	137.75	0.38
101	59.85	0.41	41	83.88	0.40				39	115.15	0.38	99	138.13	0.38
100	60.26	0.41	40	84.27	0.39				40	115.54	0.39	100	138.51	0.38
99	60.67	0.41	39	84.67	0.40				41	115.93	0.39	101	138.89	0.38
98	61.07	0.40	38	85.06	0.39				42	116.31	0.38	102	139.27	0.38
97	61.48	0.41	37	85.46	0.40				43	116.70	0.39	103	139.65	0.38
96	61.87	0.41	36	85.85	0.39				44	117.08	0.38	104	140.03	0.38
95	62.29	0.42	35	86.25	0.40				45	117.47	0.39	105	140.40	0.38
94	62.69	0.40	34	86.64	0.39				46	117.85	0.38	106	140.77	0.38
93	63.10	0.41	33	87.04	0.40				47	118.24	0.39	107	141.15	0.38
92	63.50	0.40	32	87.43	0.39				48	118.62	0.38	108	141.53	0.38
91	63.91	0.41	31	87.83	0.40				49	119.01	0.39	109	141.91	0.38
90	64.30	0.39	30	88.22	0.39				50	119.40	0.39	110	142.29	0.38
89	64.70	0.40	29	88.62	0.40				51	119.78	0.38	111	142.66	0.37
88	65.11	0.41	28	89.01	0.39				52	120.16	0.38	112	143.04	0.38
87	65.51	0.40	27	89.40	0.39				53	120.55	0.39	113	143.42	0.38
86	65.91	0.40	26	89.80	0.40				54	120.93	0.38	114	143.80	0.38
85	66.31	0.40	25	90.19	0.39				55	121.32	0.39	115	144.18	0.38
84	66.72	0.41	24	90.59	0.40				56	121.70	0.38	116	144.56	0.38
83	67.12	0.40	23	90.98	0.39				57	122.09	0.39	117	144.94	0.38
82	67.52	0.40	22	91.37	0.39				58	122.47	0.38	118	145.32	0.38
81	67.92	0.40	21	91.77	0.40				59	122.86	0.39	119	145.69	0.37



DEWETRON

CHANNEL SETUP

- ① Available in *Sensor Scaling* menu
 - ② A new point can be added with the + button
 - ③ Directly measure points with AVG or ACRMS Button
 - ④ Copy and paste from one channel to another or from/to Excel
- Additional Infos:
- > Linear interpolation between the supporting points
 - > Channel output is NaN outside the defined range
 - > Tab-button generates a new line
- Exercise: Generate the table scaling on the right in OXYGEN

SENSOR SCALING

Scaling 2-point Table ①

Unit V Copy Paste

X [V]	Y [V]	+
		②

AVG ③ AC RMS

-5	-10
-4	-2
-3	-1
-2	0
-1	3
0	4
1	6
2	10
3	15
4	16
5	19

SENSOR SCALING

Scaling 2-point Table

Unit V Copy ④ Paste

X [V]	Y [V]	+
-5	-10	-
-4	-2	-
-3	-1	-
-2	0	-
-1	3	-
0	4	-
1	6	-

AVG AC RMS