

Application Note AN-017

P105B, P115B, and P125B Pickup Voltage, Dropout Voltage, and Coil Current vs. Temperature

Since Gigavac contactors are operated by a coil that changes resistance with temperature, Pick-up Voltage and Drop Out Voltage will decrease at temperatures below 25C and increase at temperatures above 25C. Coil current will be higher at lower temperatures and lower at higher temperatures. Figures 1 through 3 shows the Pickup and Dropout Voltages and Coil Current over the temperature range while Table 1 presents the data numerically.

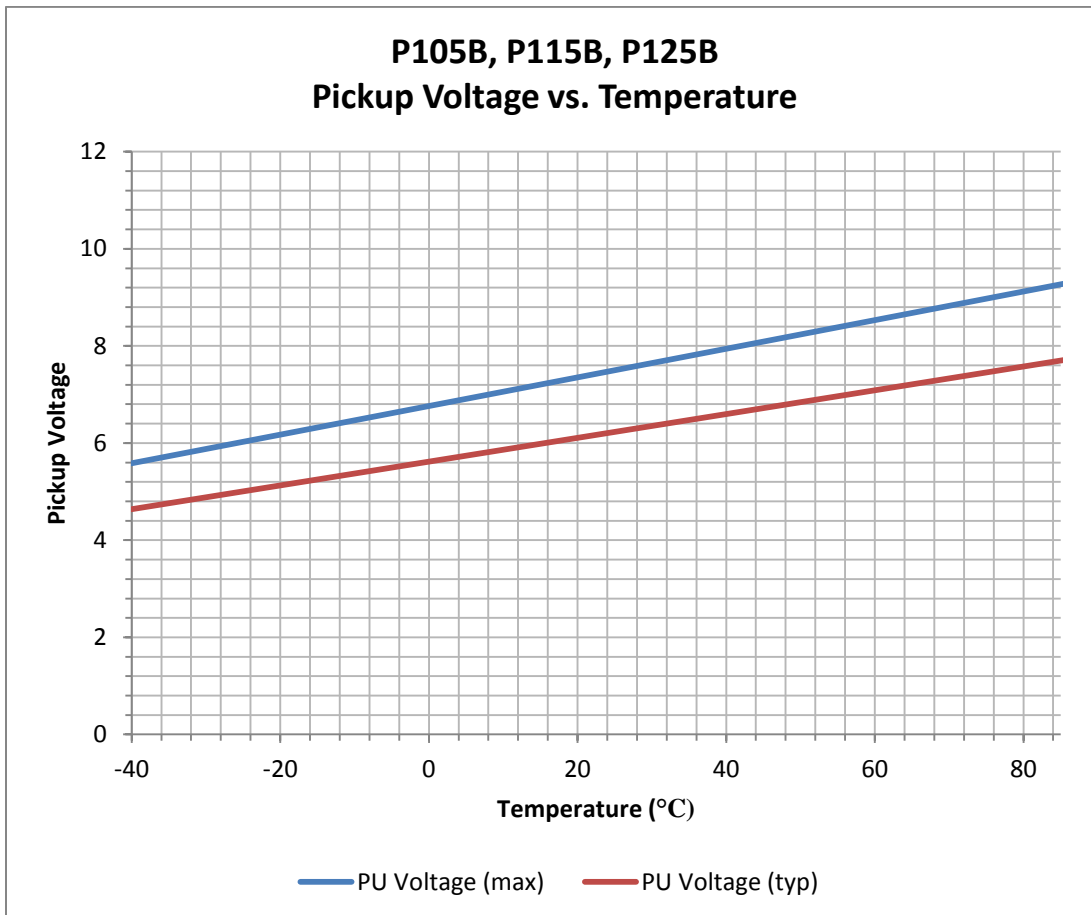


Figure 1.

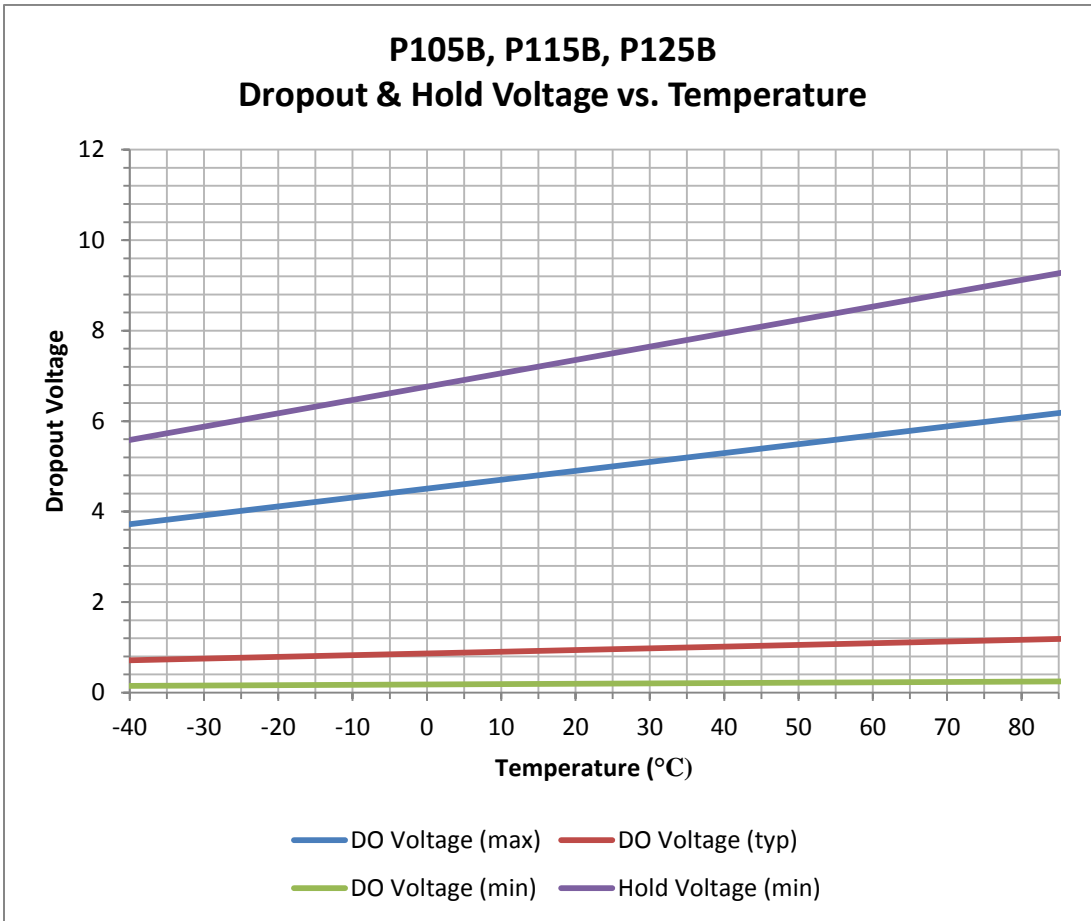


Figure 2.

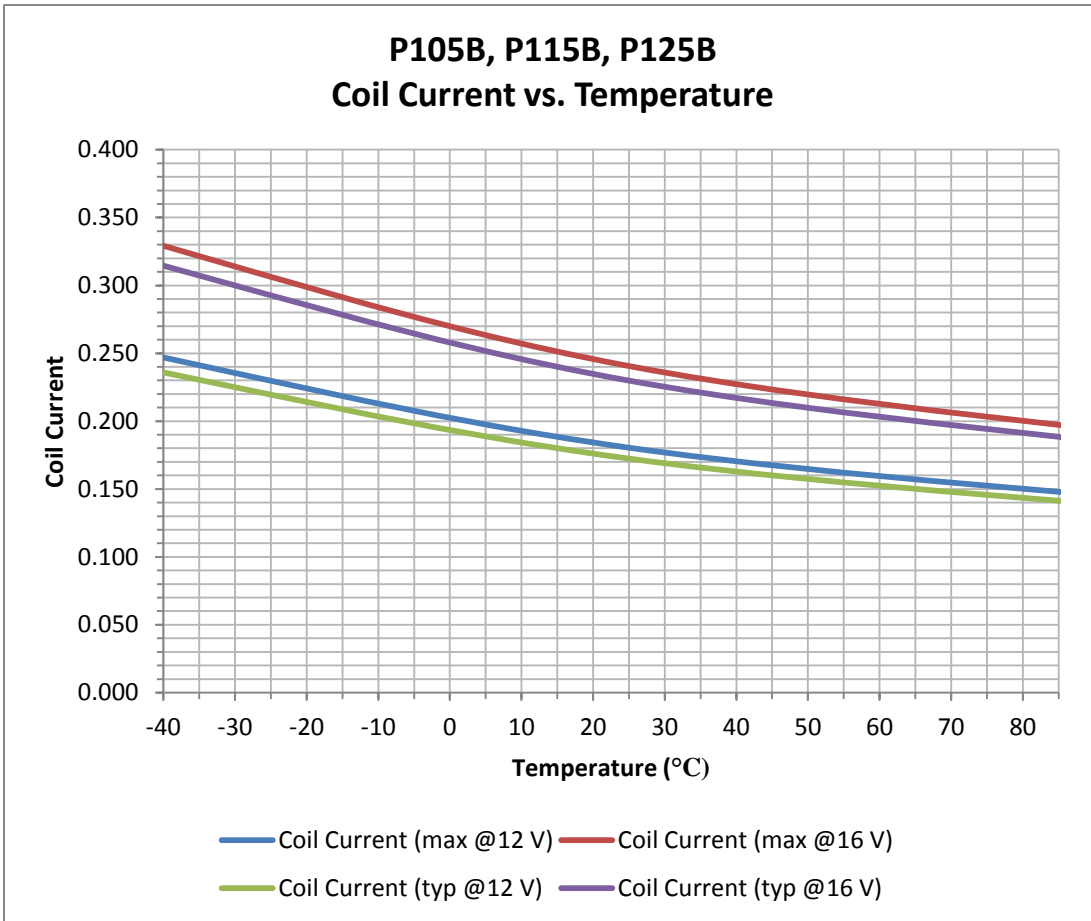


Figure 3.

Table 1

Temp. °C	P105B, P115B, & P125B									
	Pick up Voltage		Drop out Voltage			Hold Voltage	Coil Current			
	Typ	Max	Min	Typ	Max		@ 12Vdc		@16 Vdc	
							Max	Typ	Max	Typ
-40	4.64	5.58	0.15	0.71	3.72	5.58	0.232	0.242	0.309	0.323
-35	4.76	5.73	0.15	0.73	3.82	5.73	0.226	0.236	0.301	0.315
-30	4.88	5.88	0.16	0.75	3.92	5.88	0.220	0.230	0.293	0.307
-25	5.01	6.03	0.16	0.77	4.02	6.03	0.215	0.225	0.286	0.299
-20	5.13	6.17	0.16	0.79	4.12	6.17	0.209	0.219	0.279	0.292
-15	5.25	6.32	0.17	0.81	4.21	6.32	0.205	0.214	0.273	0.285
-10	5.37	6.47	0.17	0.83	4.31	6.47	0.200	0.209	0.267	0.279
-5	5.50	6.62	0.18	0.85	4.41	6.62	0.195	0.205	0.261	0.273
0	5.62	6.76	0.18	0.87	4.51	6.76	0.191	0.200	0.255	0.267
5	5.74	6.91	0.18	0.88	4.61	6.91	0.187	0.196	0.249	0.261
10	5.86	7.06	0.19	0.90	4.71	7.06	0.183	0.192	0.244	0.256
15	5.99	7.21	0.19	0.92	4.80	7.21	0.179	0.188	0.239	0.250
20	6.11	7.35	0.20	0.94	4.90	7.35	0.176	0.184	0.234	0.245
25	6.23	7.50	0.20	0.96	5.00	7.50	0.172	0.180	0.230	0.241
30	6.35	7.65	0.20	0.98	5.10	7.65	0.169	0.177	0.225	0.236
35	6.47	7.79	0.21	1.00	5.20	7.79	0.166	0.174	0.221	0.232
40	6.60	7.94	0.21	1.02	5.29	7.94	0.163	0.170	0.217	0.227
45	6.72	8.09	0.22	1.04	5.39	8.09	0.160	0.167	0.213	0.223
50	6.84	8.24	0.22	1.05	5.49	8.24	0.157	0.164	0.209	0.219
55	6.96	8.38	0.22	1.07	5.59	8.38	0.154	0.161	0.206	0.215
60	7.09	8.53	0.23	1.09	5.69	8.53	0.152	0.159	0.202	0.212
65	7.21	8.68	0.23	1.11	5.79	8.68	0.149	0.156	0.199	0.208
70	7.33	8.83	0.24	1.13	5.88	8.83	0.147	0.153	0.195	0.204
75	7.45	8.97	0.24	1.15	5.98	8.97	0.144	0.151	0.192	0.201
80	7.58	9.12	0.24	1.17	6.08	9.12	0.142	0.148	0.189	0.198
85	7.70	9.27	0.25	1.19	6.18	9.27	0.140	0.146	0.186	0.195

If you have any questions you can always call us at 805-684-8401.