

Application Note AN-018

P105C, P115C, and P125C 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.

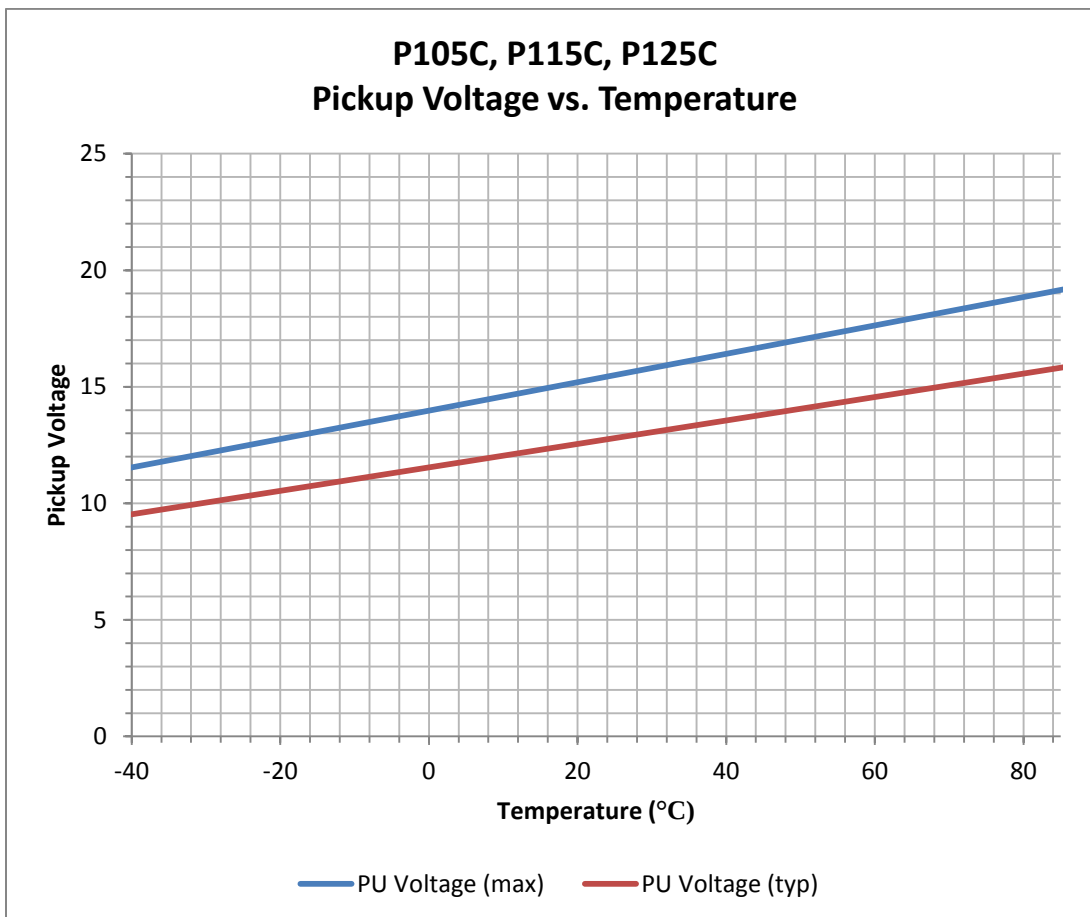


Figure 1.

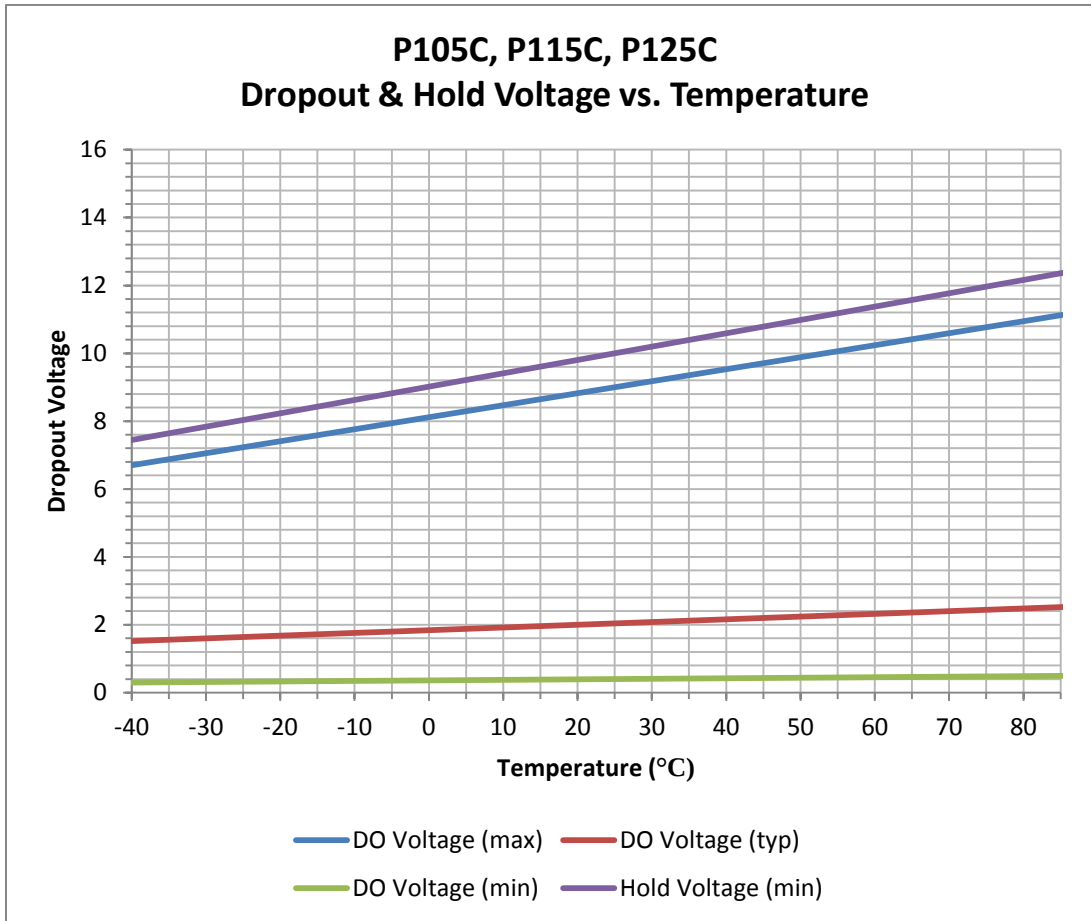


Figure 2.

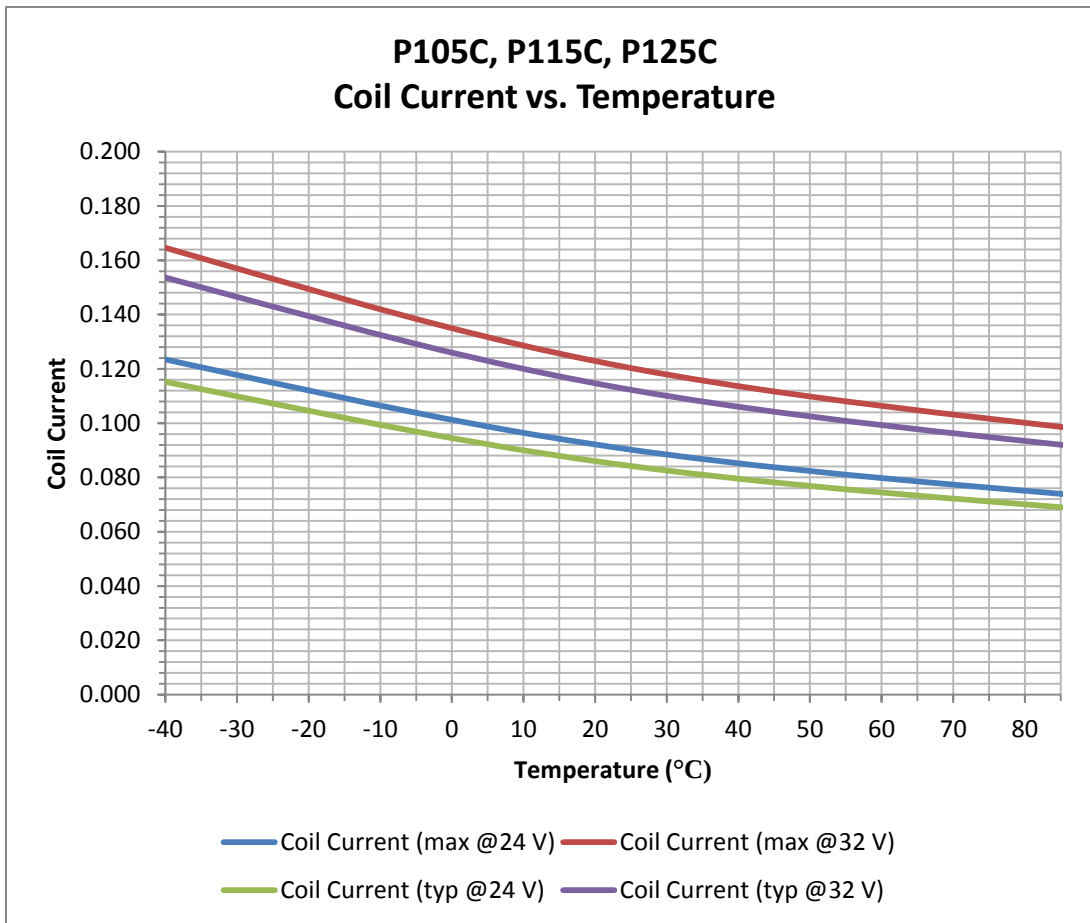


Figure 3.

Table 1

Temp. °C	P105C, P115C, & P125C									
	Pick up Voltage		Drop out Voltage			Hold Voltage	Coil Current			
	Typ	Max	Min	Typ	Max		@24Vdc		@32Vdc	
							Max	Typ	Max	Typ
-40	9.53	11.54	0.30	1.52	6.70	7.45	0.113	0.121	0.151	0.162
-35	9.78	11.85	0.31	1.56	6.88	7.64	0.110	0.118	0.147	0.157
-30	10.03	12.15	0.31	1.60	7.05	7.84	0.107	0.115	0.143	0.153
-25	10.28	12.45	0.32	1.64	7.23	8.04	0.105	0.112	0.140	0.150
-20	10.54	12.76	0.33	1.68	7.41	8.23	0.102	0.110	0.136	0.146
-15	10.79	13.06	0.34	1.72	7.59	8.43	0.100	0.107	0.133	0.143
-10	11.04	13.37	0.34	1.76	7.76	8.62	0.098	0.105	0.130	0.139
-5	11.29	13.67	0.35	1.80	7.94	8.82	0.095	0.102	0.127	0.136
0	11.54	13.98	0.36	1.84	8.12	9.02	0.093	0.100	0.125	0.133
5	11.79	14.28	0.37	1.88	8.29	9.21	0.091	0.098	0.122	0.131
10	12.05	14.59	0.38	1.92	8.47	9.41	0.089	0.096	0.119	0.128
15	12.30	14.89	0.38	1.96	8.65	9.61	0.088	0.094	0.117	0.125
20	12.55	15.20	0.39	2.00	8.82	9.80	0.086	0.092	0.115	0.123
25	12.80	15.50	0.40	2.04	9.00	10.00	0.084	0.090	0.112	0.120
30	13.05	15.80	0.41	2.08	9.18	10.20	0.083	0.088	0.110	0.118
35	13.30	16.11	0.42	2.12	9.35	10.39	0.081	0.087	0.108	0.116
40	13.55	16.41	0.42	2.16	9.53	10.59	0.080	0.085	0.106	0.114
45	13.81	16.72	0.43	2.20	9.71	10.79	0.078	0.084	0.104	0.112
50	14.06	17.02	0.44	2.24	9.88	10.98	0.077	0.082	0.102	0.110
55	14.31	17.33	0.45	2.28	10.06	11.18	0.075	0.081	0.100	0.108
60	14.56	17.63	0.46	2.32	10.24	11.38	0.074	0.079	0.099	0.106
65	14.81	17.94	0.46	2.36	10.41	11.57	0.073	0.078	0.097	0.104
70	15.06	18.24	0.47	2.40	10.59	11.77	0.072	0.077	0.095	0.102
75	15.32	18.55	0.48	2.44	10.77	11.97	0.070	0.075	0.094	0.101
80	15.57	18.85	0.49	2.48	10.95	12.16	0.069	0.074	0.092	0.099
85	15.82	19.15	0.49	2.52	11.12	12.36	0.068	0.073	0.091	0.097

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