

Application Note AN-008 **GX14B, GX200B, and GX23B** **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 4 shows the Pickup and Dropout Voltages and Inrush and Coil Currents over the temperature range while Table 1 presents the data numerically.

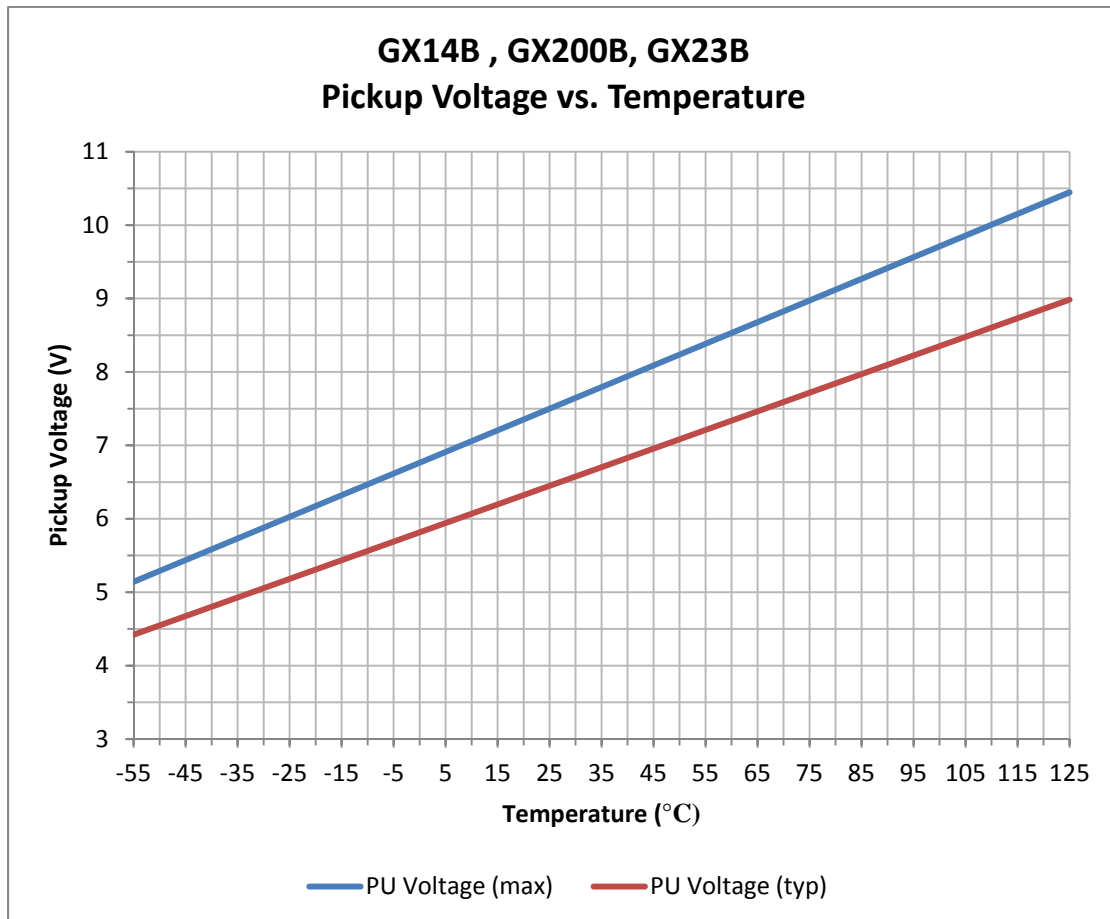


Figure 1.

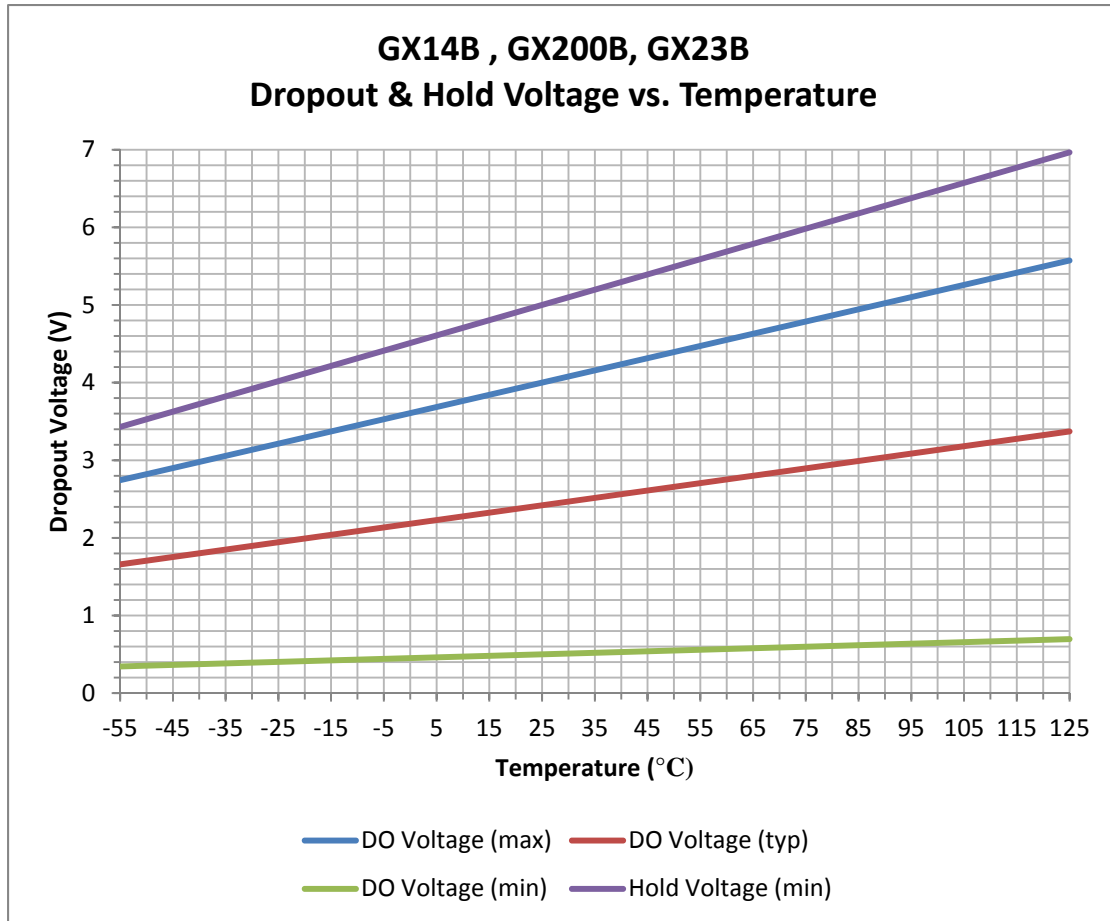


Figure 2.

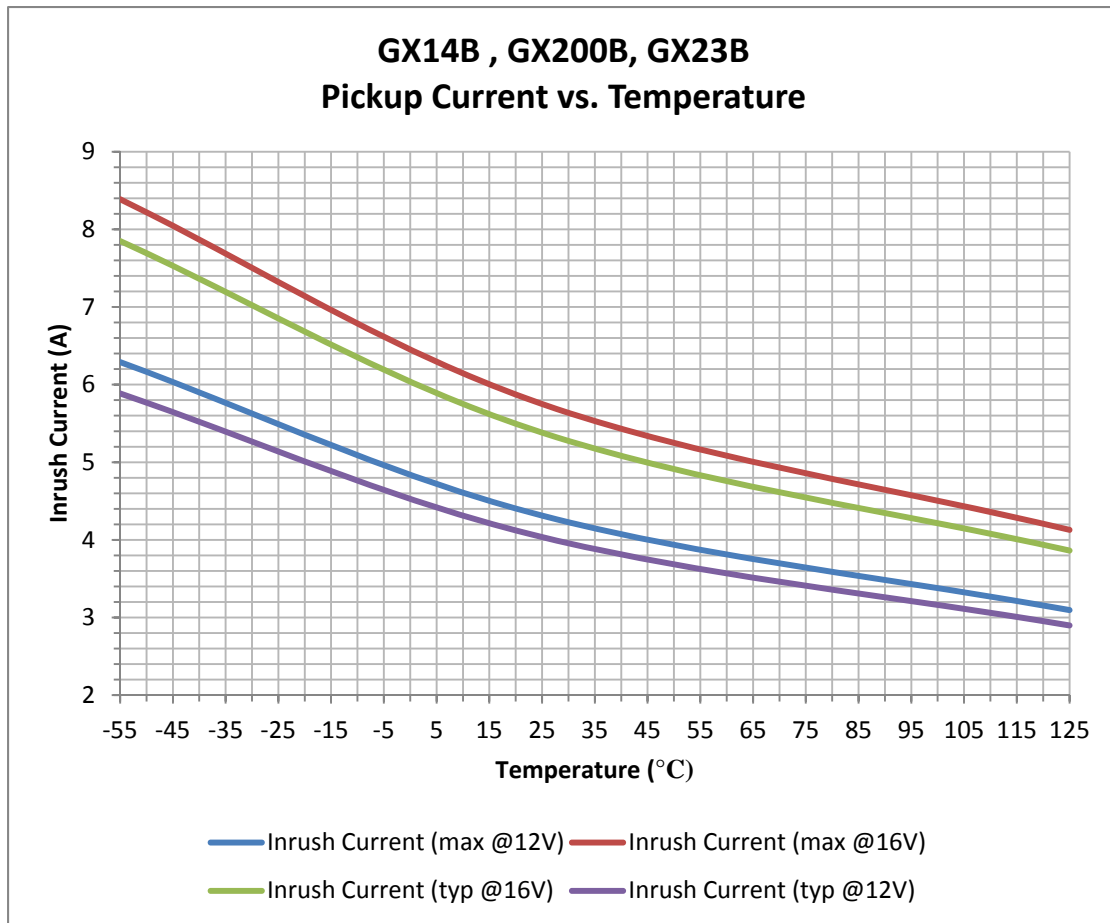


Figure 3.

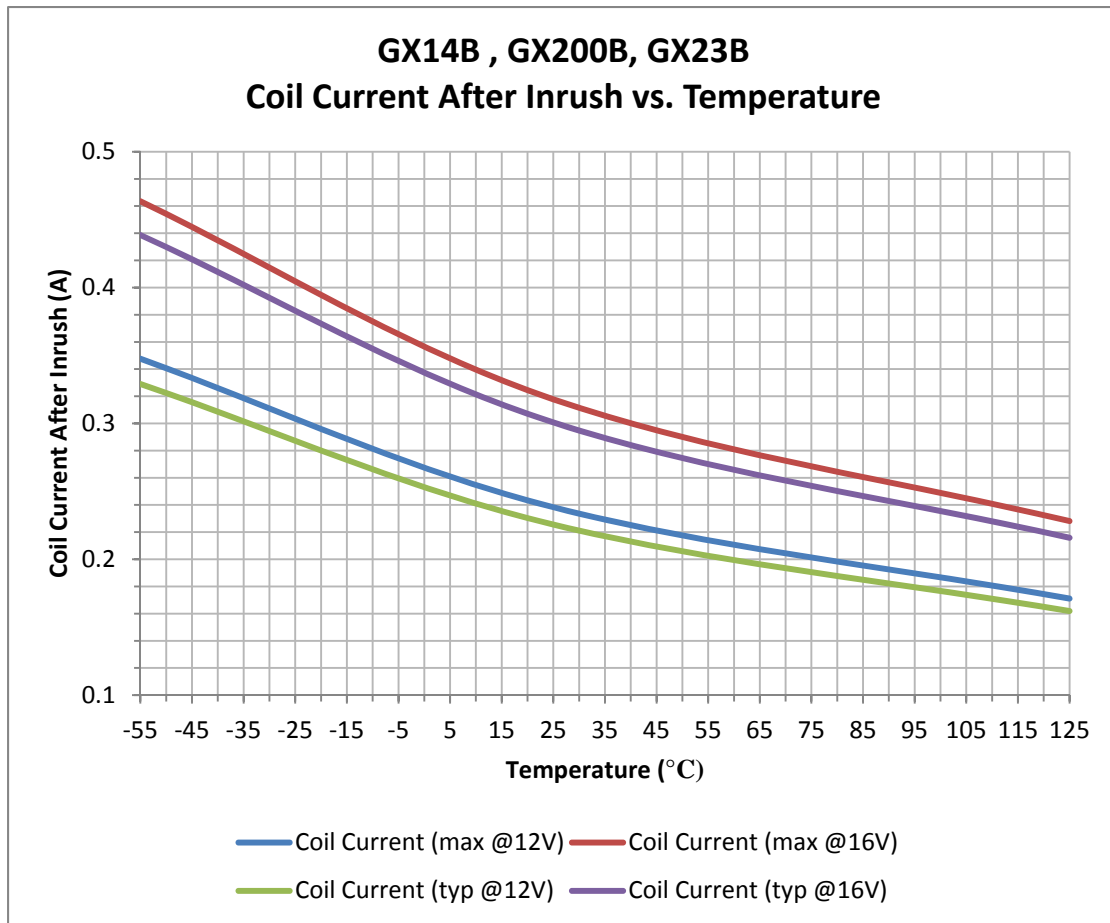


Figure 4.

Table 1

Temp. °C	GX14B, GX200B, & GX23B													
	Pick up Voltage		Drop out Voltage			Hold Voltage	Inrush Current				Coil Current			
	Typ	Max	Min	Typ	Max		@ 12Vdc		@16 Vdc		@ 12Vdc		@16 Vdc	
						Max	Typ	Max	Typ	Max	Typ	Max	Typ	
-55	4.42	5.14	0.34	1.66	2.74	3.43	6.29	5.89	8.39	7.85	0.348	0.329	0.463	0.439
-50	4.55	5.29	0.35	1.71	2.82	3.53	6.12	5.72	8.15	7.63	0.338	0.320	0.451	0.426
-45	4.68	5.44	0.36	1.75	2.90	3.62	5.95	5.57	7.93	7.42	0.329	0.311	0.438	0.415
-40	4.80	5.58	0.37	1.80	2.98	3.72	5.79	5.42	7.72	7.23	0.320	0.303	0.427	0.404
-35	4.93	5.73	0.38	1.85	3.06	3.82	5.64	5.28	7.53	7.04	0.312	0.295	0.416	0.394
-30	5.06	5.88	0.39	1.90	3.14	3.92	5.50	5.15	7.34	6.87	0.304	0.288	0.405	0.384
-25	5.18	6.03	0.40	1.94	3.21	4.02	5.37	5.02	7.16	6.70	0.297	0.281	0.395	0.374
-20	5.31	6.17	0.41	1.99	3.29	4.12	5.24	4.90	6.99	6.54	0.290	0.274	0.386	0.365
-15	5.44	6.32	0.42	2.04	3.37	4.21	5.12	4.79	6.82	6.39	0.283	0.268	0.377	0.357
-10	5.56	6.47	0.43	2.09	3.45	4.31	5.00	4.68	6.67	6.24	0.276	0.262	0.368	0.349
-5	5.69	6.62	0.44	2.13	3.53	4.41	4.89	4.58	6.52	6.10	0.270	0.256	0.360	0.341
0	5.82	6.76	0.45	2.18	3.61	4.51	4.78	4.48	6.38	5.97	0.264	0.250	0.352	0.334
5	5.94	6.91	0.46	2.23	3.69	4.61	4.68	4.38	6.24	5.84	0.259	0.245	0.345	0.326
10	6.07	7.06	0.47	2.28	3.76	4.71	4.58	4.29	6.11	5.72	0.253	0.240	0.338	0.320
15	6.20	7.21	0.48	2.32	3.84	4.80	4.49	4.20	5.99	5.60	0.248	0.235	0.331	0.313
20	6.32	7.35	0.49	2.37	3.92	4.90	4.40	4.12	5.87	5.49	0.243	0.230	0.324	0.307
25	6.45	7.50	0.50	2.42	4.00	5.00	4.31	4.04	5.75	5.38	0.238	0.226	0.318	0.301
30	6.58	7.65	0.51	2.47	4.08	5.10	4.23	3.96	5.64	5.28	0.234	0.221	0.312	0.295
35	6.70	7.79	0.52	2.52	4.16	5.20	4.15	3.88	5.53	5.18	0.229	0.217	0.306	0.289
40	6.83	7.94	0.53	2.56	4.24	5.29	4.07	3.81	5.43	5.08	0.225	0.213	0.300	0.284
45	6.96	8.09	0.54	2.61	4.31	5.39	4.00	3.74	5.33	4.99	0.221	0.209	0.295	0.279
50	7.08	8.24	0.55	2.66	4.39	5.49	3.93	3.68	5.24	4.90	0.217	0.205	0.289	0.274
55	7.21	8.38	0.56	2.71	4.47	5.59	3.86	3.61	5.14	4.81	0.213	0.202	0.284	0.269
60	7.34	8.53	0.57	2.75	4.55	5.69	3.79	3.55	5.06	4.73	0.210	0.198	0.279	0.264
65	7.46	8.68	0.58	2.80	4.63	5.79	3.73	3.49	4.97	4.65	0.206	0.195	0.275	0.260
70	7.59	8.83	0.59	2.85	4.71	5.88	3.66	3.43	4.89	4.57	0.203	0.192	0.270	0.256
75	7.72	8.97	0.60	2.90	4.79	5.98	3.60	3.37	4.81	4.50	0.199	0.189	0.266	0.251
80	7.84	9.12	0.61	2.94	4.86	6.08	3.55	3.32	4.73	4.43	0.196	0.185	0.261	0.247
85	7.97	9.27	0.62	2.99	4.94	6.18	3.49	3.27	4.65	4.35	0.193	0.183	0.257	0.243
90	8.10	9.42	0.63	3.04	5.02	6.28	3.44	3.22	4.58	4.29	0.190	0.180	0.253	0.240
95	8.22	9.56	0.64	3.09	5.10	6.38	3.38	3.17	4.51	4.22	0.187	0.177	0.249	0.236
100	8.35	9.71	0.65	3.13	5.18	6.47	3.33	3.12	4.44	4.16	0.184	0.174	0.245	0.232
105	8.48	9.86	0.66	3.18	5.26	6.57	3.28	3.07	4.38	4.09	0.181	0.172	0.242	0.229
110	8.60	10.01	0.67	3.23	5.34	6.67	3.23	3.03	4.31	4.03	0.179	0.169	0.238	0.225
115	8.73	10.15	0.68	3.28	5.41	6.77	3.19	2.98	4.25	3.98	0.176	0.167	0.235	0.222
120	8.86	10.30	0.69	3.32	5.49	6.87	3.14	2.94	4.19	3.92	0.174	0.164	0.231	0.219
125	8.98	10.45	0.70	3.37	5.57	6.97	3.10	2.90	4.13	3.86	0.171	0.162	0.228	0.216

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