

Application Note AN-006

GX11B, GX12B, and GX21B

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.

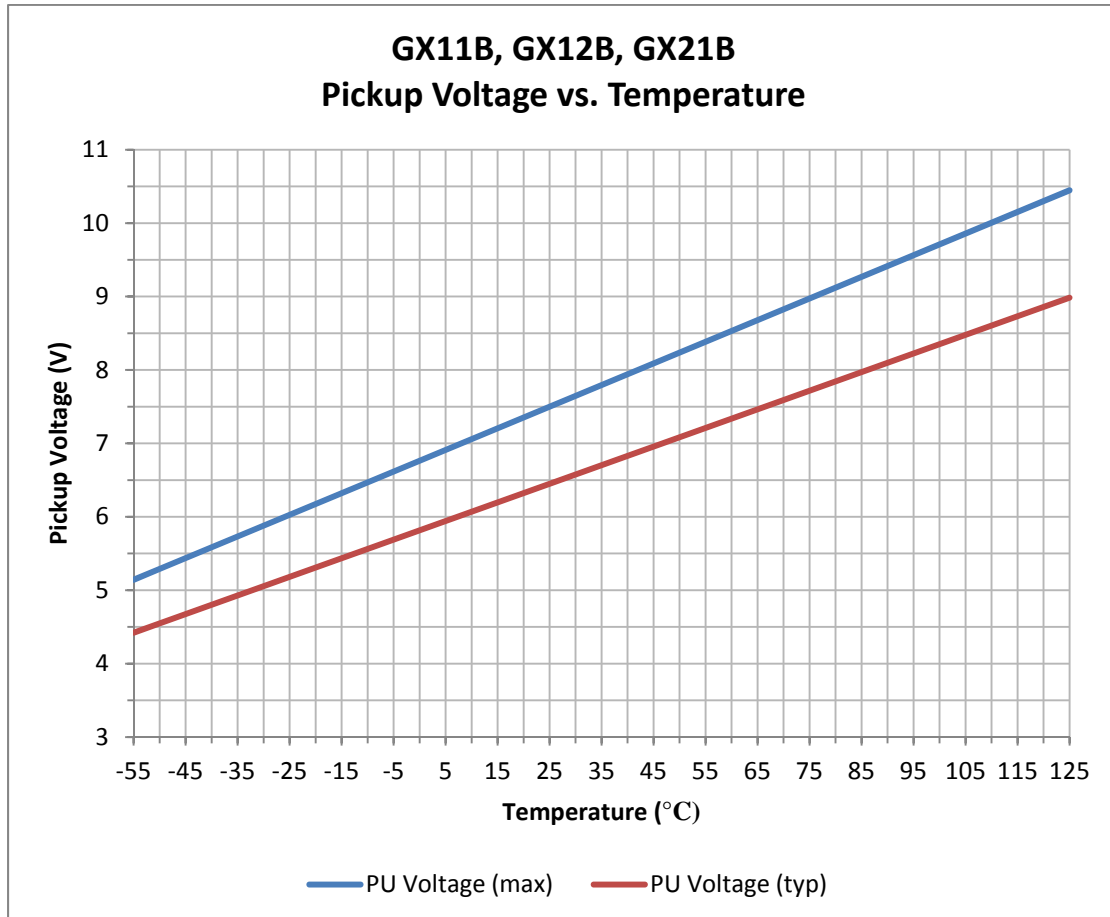


Figure 1.

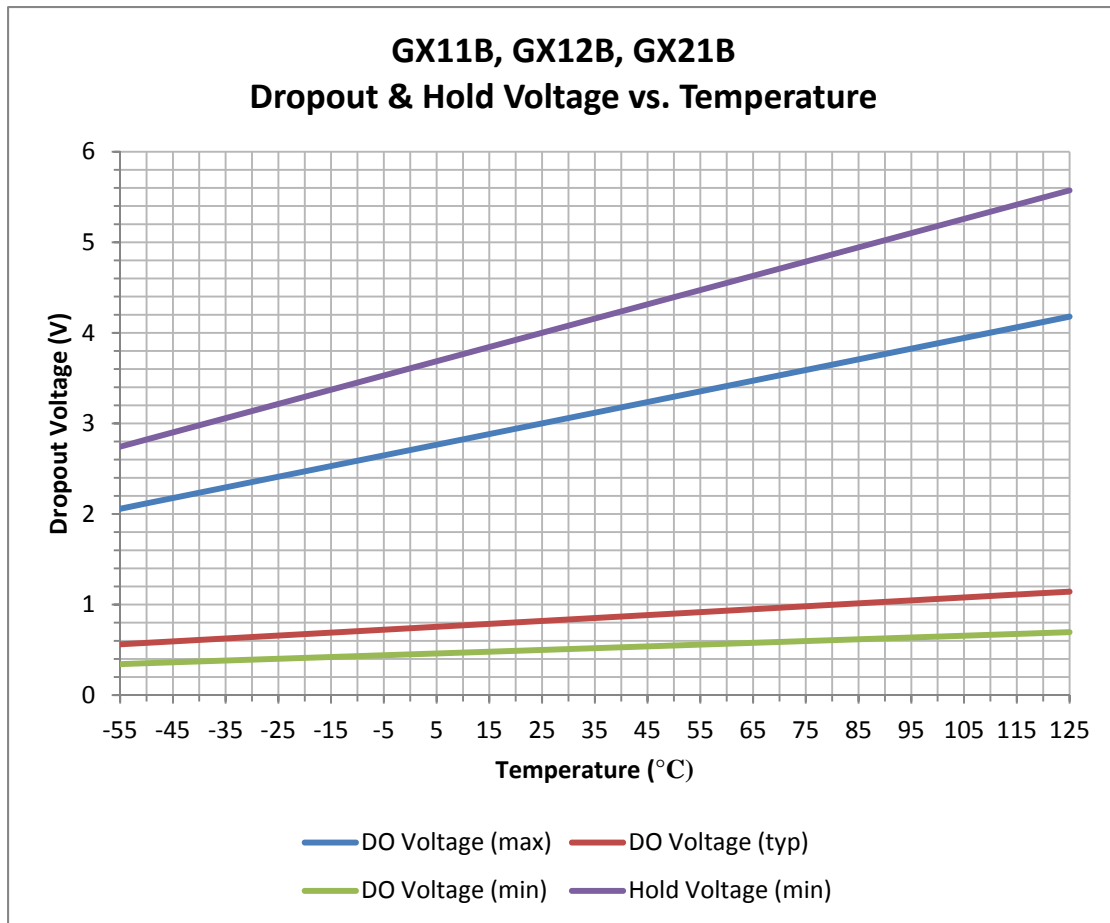


Figure 2.

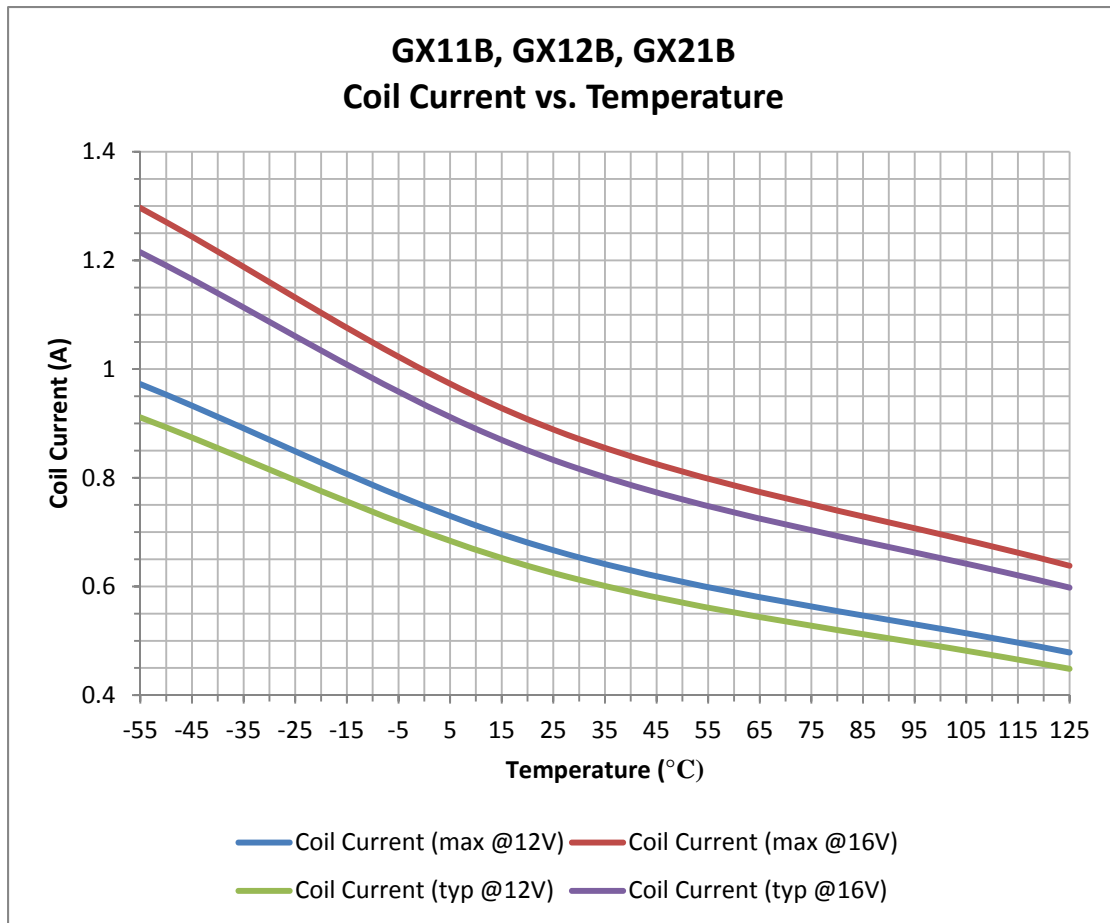


Figure 3.

Table 1

Temp. °C	GX11B, GX12B, & GX21B									
	Pick up Voltage		Drop out Voltage			Hold Voltage	Coil Current			
	Typ	Max	Min	Typ	Max		@ 12Vdc		@16 Vdc	
							Max	Typ	Max	Typ
-55	4.42	5.14	0.34	0.56	2.06	2.74	0.973	0.912	1.297	1.215
-50	4.55	5.29	0.35	0.58	2.12	2.82	0.946	0.886	1.261	1.181
-45	4.68	5.44	0.36	0.59	2.17	2.90	0.920	0.862	1.226	1.149
-40	4.80	5.58	0.37	0.61	2.23	2.98	0.896	0.839	1.194	1.119
-35	4.93	5.73	0.38	0.63	2.29	3.06	0.873	0.818	1.163	1.090
-30	5.06	5.88	0.39	0.64	2.35	3.14	0.851	0.797	1.134	1.063
-25	5.18	6.03	0.40	0.66	2.41	3.21	0.830	0.778	1.106	1.037
-20	5.31	6.17	0.41	0.67	2.47	3.29	0.810	0.759	1.080	1.012
-15	5.44	6.32	0.42	0.69	2.53	3.37	0.791	0.742	1.055	0.988
-10	5.56	6.47	0.43	0.71	2.59	3.45	0.773	0.725	1.031	0.966
-5	5.69	6.62	0.44	0.72	2.65	3.53	0.756	0.709	1.008	0.944
0	5.82	6.76	0.45	0.74	2.71	3.61	0.740	0.693	0.986	0.924
5	5.94	6.91	0.46	0.76	2.76	3.69	0.724	0.678	0.965	0.904
10	6.07	7.06	0.47	0.77	2.82	3.76	0.709	0.664	0.945	0.885
15	6.20	7.21	0.48	0.79	2.88	3.84	0.694	0.651	0.925	0.867
20	6.32	7.35	0.49	0.80	2.94	3.92	0.680	0.638	0.907	0.850
25	6.45	7.50	0.50	0.82	3.00	4.00	0.667	0.625	0.889	0.833
30	6.58	7.65	0.51	0.84	3.06	4.08	0.654	0.613	0.872	0.817
35	6.70	7.79	0.52	0.85	3.12	4.16	0.642	0.601	0.855	0.802
40	6.83	7.94	0.53	0.87	3.18	4.24	0.630	0.590	0.840	0.787
45	6.96	8.09	0.54	0.88	3.24	4.31	0.618	0.579	0.824	0.772
50	7.08	8.24	0.55	0.90	3.29	4.39	0.607	0.569	0.809	0.758
55	7.21	8.38	0.56	0.92	3.35	4.47	0.597	0.559	0.795	0.745
60	7.34	8.53	0.57	0.93	3.41	4.55	0.586	0.549	0.782	0.732
65	7.46	8.68	0.58	0.95	3.47	4.63	0.576	0.540	0.768	0.720
70	7.59	8.83	0.59	0.97	3.53	4.71	0.567	0.531	0.755	0.708
75	7.72	8.97	0.60	0.98	3.59	4.79	0.557	0.522	0.743	0.696
80	7.84	9.12	0.61	1.00	3.65	4.86	0.548	0.514	0.731	0.685
85	7.97	9.27	0.62	1.01	3.71	4.94	0.540	0.506	0.719	0.674
90	8.10	9.42	0.63	1.03	3.77	5.02	0.531	0.498	0.708	0.664
95	8.22	9.56	0.64	1.05	3.83	5.10	0.523	0.490	0.697	0.653
100	8.35	9.71	0.65	1.06	3.88	5.18	0.515	0.483	0.687	0.643
105	8.48	9.86	0.66	1.08	3.94	5.26	0.507	0.476	0.676	0.634
110	8.60	10.01	0.67	1.09	4.00	5.34	0.500	0.468	0.666	0.624
115	8.73	10.15	0.68	1.11	4.06	5.41	0.493	0.462	0.657	0.615
120	8.86	10.30	0.69	1.13	4.12	5.49	0.486	0.455	0.647	0.607
125	8.98	10.45	0.70	1.14	4.18	5.57	0.479	0.449	0.638	0.598

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