

## Application Note AN-009

### **GX14C, GX200C, and GX23C**

### **Pickup Voltage, Dropout Voltage, and Coil Current vs. Temperature**

Since Gigavac contactors are operated by a coil that changes resistance with temperature, Pickup 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.

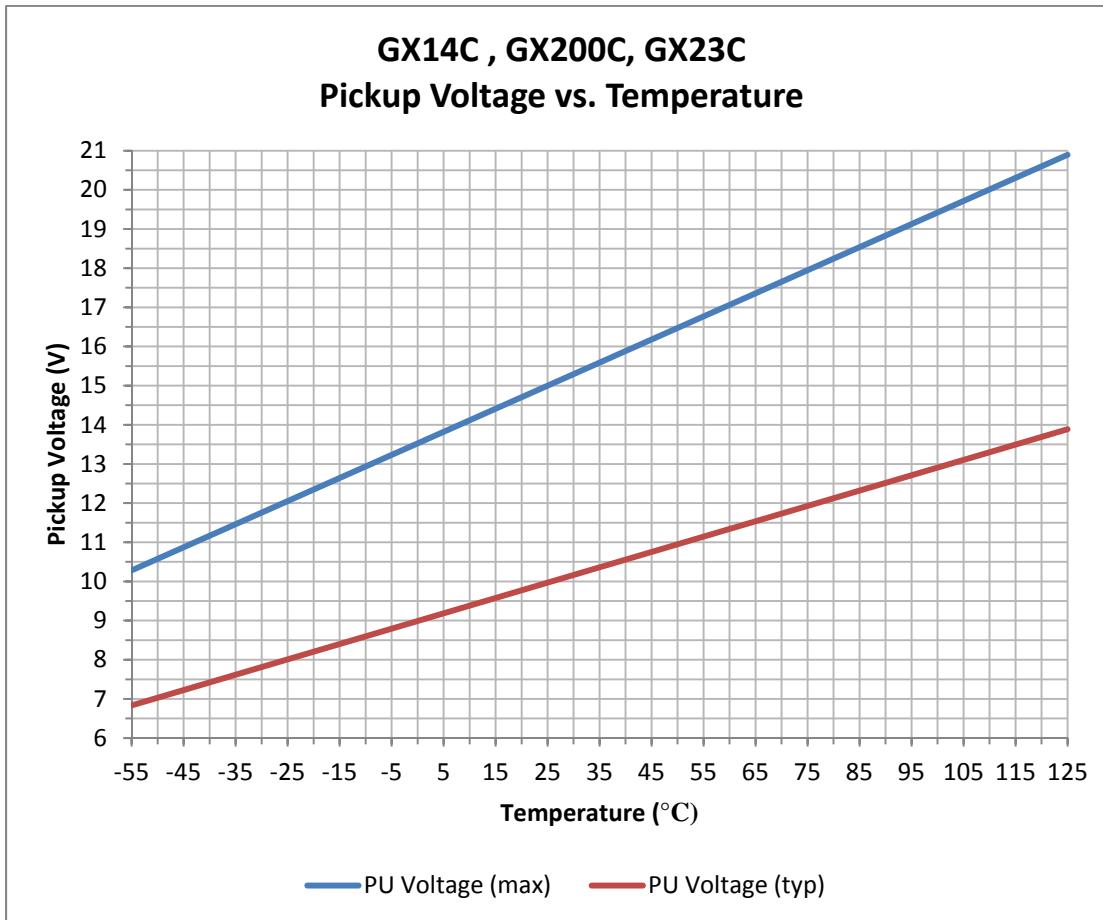
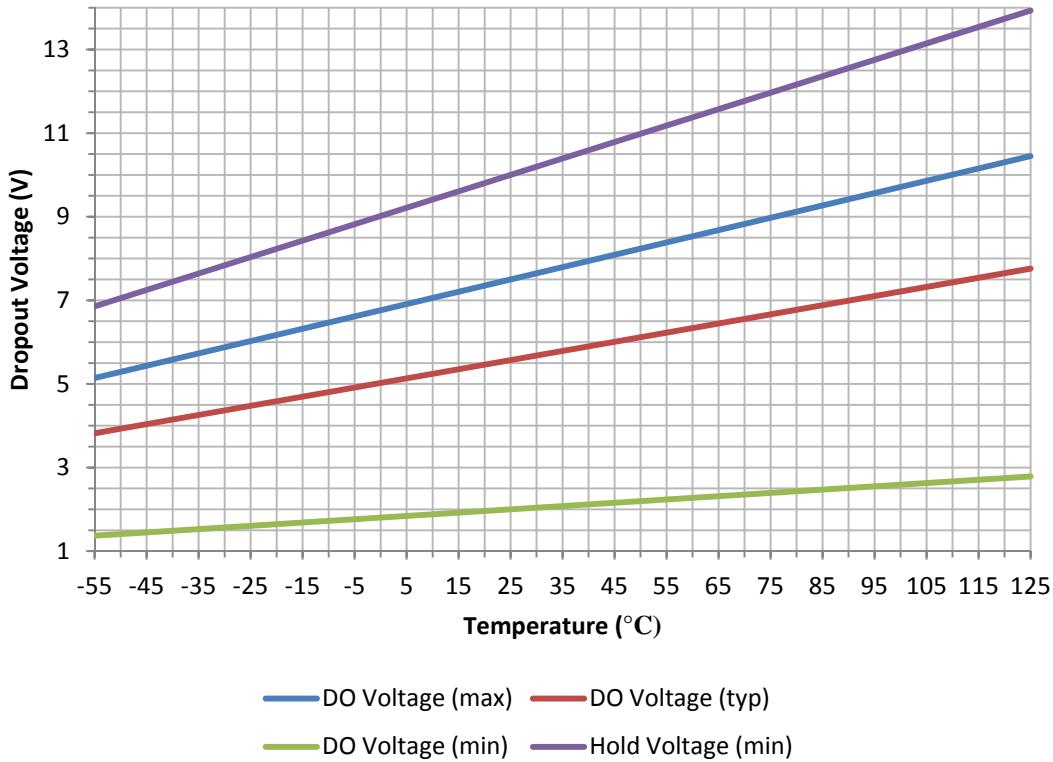
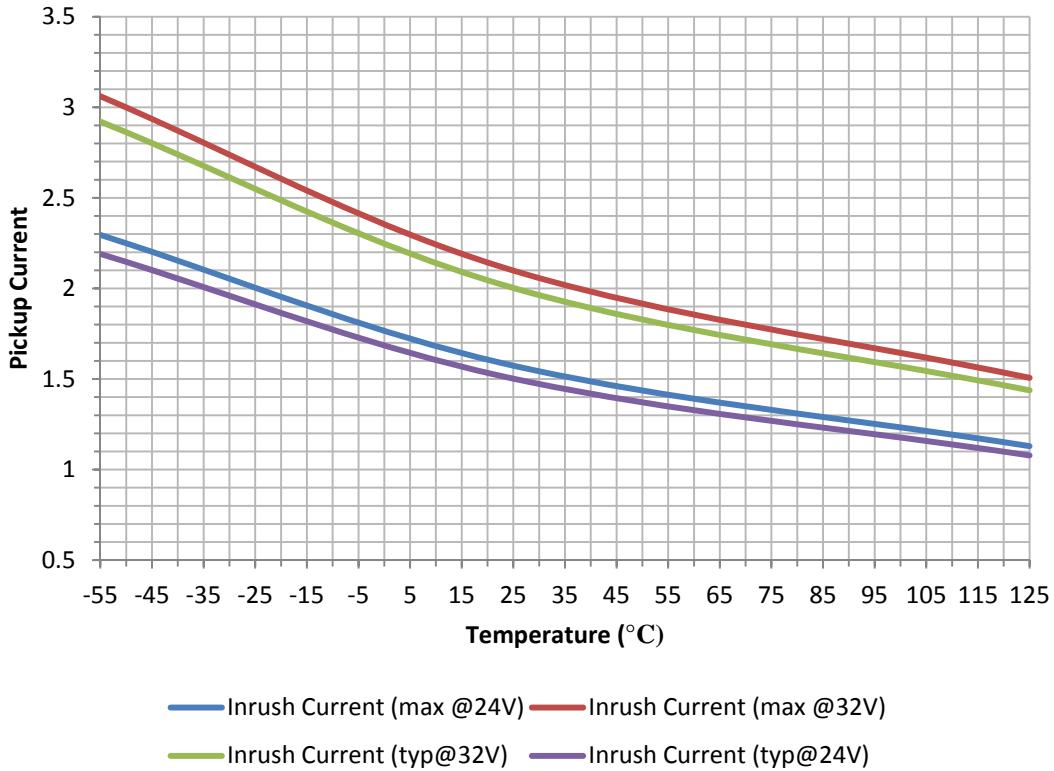
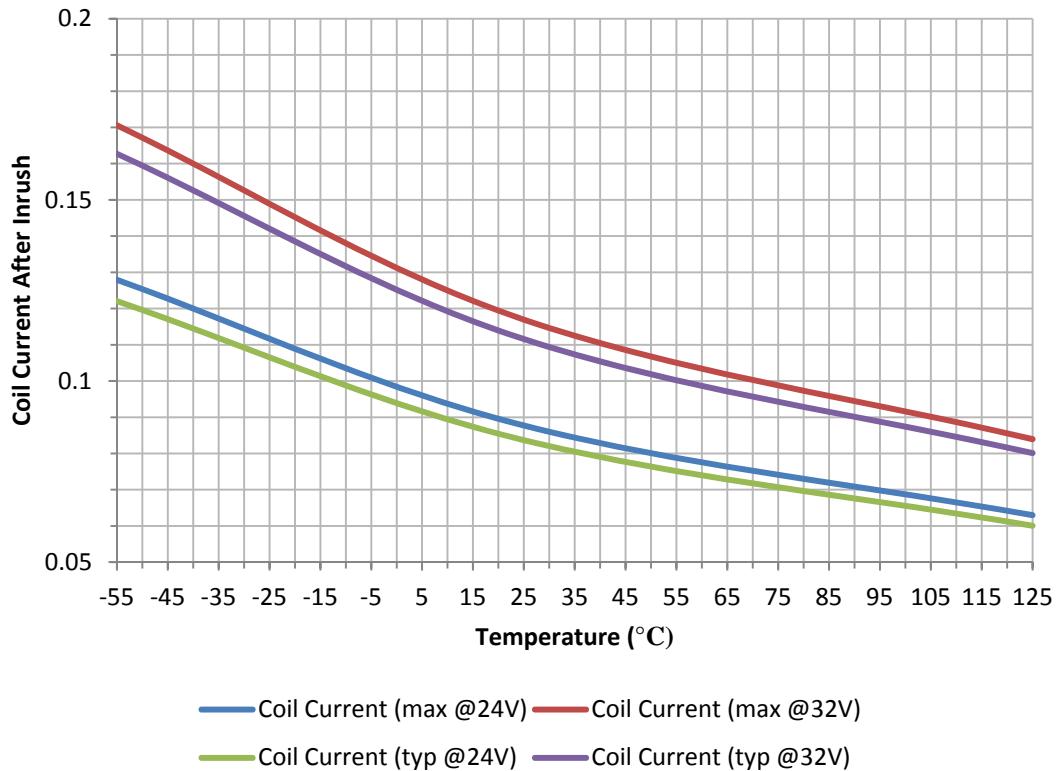


Figure 1.

**GX14C , GX200C, GX23C**  
**Dropout & Hold Voltage vs. Temperature****Figure 2.**

**GX14C , GX200C, GX23C**  
**Pickup Current vs. Temperature****Figure 3.**

**GX14C , GX200C, GX23C  
Coil Current After Inrush vs. Temperature****Figure 4.**

**Table 1**

Temp. °C	GX14C, GX200C, & GX23C													
	Pick up Voltage		Drop out Voltage			Hold Voltage	Inrush Current				Coil Current			
	Typ	Max	Min	Typ	Max		Max	Typ	Max	Typ	Max	Typ	Max	Typ
-55	6.84	10.28	1.37	3.82	5.14	6.86	2.30	2.19	3.06	2.92	0.128	0.122	0.171	0.163
-50	7.03	10.58	1.41	3.93	5.29	7.05	2.23	2.13	2.98	2.84	0.124	0.119	0.166	0.158
-45	7.23	10.87	1.45	4.04	5.44	7.25	2.17	2.07	2.89	2.76	0.121	0.115	0.161	0.154
-40	7.42	11.17	1.49	4.15	5.58	7.45	2.11	2.02	2.82	2.69	0.118	0.112	0.157	0.150
-35	7.62	11.46	1.53	4.26	5.73	7.64	2.06	1.97	2.75	2.62	0.115	0.110	0.153	0.146
-30	7.81	11.76	1.57	4.37	5.88	7.84	2.01	1.92	2.68	2.55	0.112	0.107	0.149	0.142
-25	8.01	12.05	1.61	4.48	6.03	8.04	1.96	1.87	2.61	2.49	0.109	0.104	0.146	0.139
-20	8.21	12.35	1.65	4.58	6.17	8.23	1.91	1.82	2.55	2.43	0.107	0.102	0.142	0.136
-15	8.40	12.64	1.69	4.69	6.32	8.43	1.87	1.78	2.49	2.38	0.104	0.099	0.139	0.132
-10	8.60	12.94	1.72	4.80	6.47	8.62	1.82	1.74	2.43	2.32	0.102	0.097	0.136	0.129
-5	8.79	13.23	1.76	4.91	6.62	8.82	1.78	1.70	2.38	2.27	0.099	0.095	0.133	0.126
0	8.99	13.53	1.80	5.02	6.76	9.02	1.75	1.67	2.33	2.22	0.097	0.093	0.130	0.124
5	9.19	13.82	1.84	5.13	6.91	9.21	1.71	1.63	2.28	2.17	0.095	0.091	0.127	0.121
10	9.38	14.12	1.88	5.24	7.06	9.41	1.67	1.60	2.23	2.13	0.093	0.089	0.124	0.119
15	9.58	14.41	1.92	5.35	7.21	9.61	1.64	1.56	2.18	2.08	0.091	0.087	0.122	0.116
20	9.77	14.71	1.96	5.46	7.35	9.80	1.61	1.53	2.14	2.04	0.089	0.085	0.119	0.114
25	9.97	15.00	2.00	5.57	7.50	10.00	1.57	1.50	2.10	2.00	0.088	0.084	0.117	0.112
30	10.17	15.29	2.04	5.68	7.65	10.20	1.54	1.47	2.06	1.96	0.086	0.082	0.115	0.109
35	10.36	15.59	2.08	5.79	7.79	10.39	1.51	1.45	2.02	1.93	0.084	0.081	0.113	0.107
40	10.56	15.88	2.12	5.90	7.94	10.59	1.49	1.42	1.98	1.89	0.083	0.079	0.110	0.105
45	10.75	16.18	2.16	6.01	8.09	10.79	1.46	1.39	1.95	1.86	0.081	0.078	0.108	0.103
50	10.95	16.47	2.20	6.12	8.24	10.98	1.43	1.37	1.91	1.82	0.080	0.076	0.106	0.102
55	11.15	16.77	2.24	6.23	8.38	11.18	1.41	1.34	1.88	1.79	0.078	0.075	0.105	0.100
60	11.34	17.06	2.28	6.34	8.53	11.38	1.38	1.32	1.84	1.76	0.077	0.074	0.103	0.098
65	11.54	17.36	2.31	6.45	8.68	11.57	1.36	1.30	1.81	1.73	0.076	0.072	0.101	0.096
70	11.73	17.65	2.35	6.56	8.83	11.77	1.34	1.28	1.78	1.70	0.075	0.071	0.099	0.095
75	11.93	17.95	2.39	6.66	8.97	11.97	1.32	1.26	1.75	1.67	0.073	0.070	0.098	0.093
80	12.13	18.24	2.43	6.77	9.12	12.16	1.29	1.23	1.73	1.65	0.072	0.069	0.096	0.092
85	12.32	18.54	2.47	6.88	9.27	12.36	1.27	1.22	1.70	1.62	0.071	0.068	0.095	0.090
90	12.52	18.83	2.51	6.99	9.42	12.55	1.25	1.20	1.67	1.60	0.070	0.067	0.093	0.089
95	12.71	19.13	2.55	7.10	9.56	12.75	1.23	1.18	1.65	1.57	0.069	0.066	0.092	0.088
100	12.91	19.42	2.59	7.21	9.71	12.95	1.22	1.16	1.62	1.55	0.068	0.065	0.090	0.086
105	13.10	19.72	2.63	7.32	9.86	13.14	1.20	1.14	1.60	1.52	0.067	0.064	0.089	0.085
110	13.30	20.01	2.67	7.43	10.01	13.34	1.18	1.13	1.57	1.50	0.066	0.063	0.088	0.084
115	13.50	20.31	2.71	7.54	10.15	13.54	1.16	1.11	1.55	1.48	0.065	0.062	0.086	0.082
120	13.69	20.60	2.75	7.65	10.30	13.73	1.15	1.09	1.53	1.46	0.064	0.061	0.085	0.081
125	13.89	20.90	2.79	7.76	10.45	13.93	1.13	1.08	1.51	1.44	0.063	0.060	0.084	0.080

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