

# Catalog Supplement

G&W Electric Co.

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## G&W Viper<sup>®</sup> recloser extended cold temperature testing

G&W's Viper solid dielectric recloser line entered the marketplace in 2000 offering many user benefits including full testing above and beyond the industry's ANSI 37.60 standard. The environmental testing section of ANSI requires proper performance of the product within the temperature range of  $-40^{\circ}\text{C}$  to  $+65^{\circ}\text{C}$ . This is where most recloser manufacturer's stop. In response to many customer requests to extend this range for even harsher subzero applications, G&W has since ran further testing and can now offer ratings good through  $-60^{\circ}\text{C}$ .

### IEC TEST SPECIFICS

Tests were performed in accordance with the IEC 62271-100 standard and were conducted at a reputable third party test facility. Both G&W recloser lines, the Viper-S and Viper-ST, were tested.

This test required a completely assembled recloser minus control, to be placed inside a sealed chamber and cooled to the desired temperature for 48 hours. Any auxiliary heaters within the product were disabled per the standard. After the 48 hours, the recloser had to successfully perform 54 number of open/close operations. Both the Viper-S and Viper-ST passed this test at  $-60^{\circ}\text{C}$ . Further testing to harsher below zero temperatures was not conducted.

### CONTROL TEST

A further test was conducted outside the IEC standard requirements. A Viper-S recloser was placed inside the chamber along with a SEL 351R control. The combined units were subjected to the same test at  $-60^{\circ}\text{C}$  but this time for a 24 hour period. After the test, full load current was injected through the recloser while still at  $-60^{\circ}\text{C}$ , to confirm that the control would operate the recloser. The units passed a total of 4 open/close operations.

### RECLOSER MODULE DIELECTRIC TEST

In addition to the above, G&W performed a cold weather thermal cycle test on a recloser, solid dielectric module. While energized, the module was subjected to both progressively colder temperatures and the thermal cycling process. The module maintained its dielectric properties after a week at  $-50^{\circ}\text{C}$ , a second week at  $-60^{\circ}\text{C}$  and a third week at  $-70^{\circ}\text{C}$ .



▲ G&W Viper-S recloser including SEL 351-R control within a sealed, cold temperature chamber prior to testing.

### CUSTOMER BENEFIT

G&W is the only recloser manufacturer, that we know of, which offers and certifies a  $-60^{\circ}\text{C}$  rating. For users with harsh, subzero climate applications, this means a higher assurance of reliable performance.



▲ Padmount Viper recloser in a subzero application.