



Frequently Asked Questions:

ACR

- Are we still able to repair ACR relays in Anasco?  
The ACR reclosing relays have been obsolete for 2 years. We still can repair ACR relays subject to having all parts needed.



Frequently Asked Questions:

PVD

- What are the Drop Out times for the 87L and 87H units of the PVD21B relay?  
The Drop Out times for the 87L and 87H units are in the range of 0.5 to 2 cycles or less. It all depends of the magnitude of V or I that is actually applied to the unit.
- How can I test the Thyrite to see if it has been damaged after a high voltage surge?  
In the PVD21 IB GEK-45405 page 19, there is a test procedure to check the Thyrite unit. Applying 120 volts DC to studs 3 & 6 and checking the current. The current varies according to single or double stacking.



Frequently Asked Questions:

IAV

- The time voltage curves published on the Instruction Book start on 120% of the tap value and above. If there is a curve with times for the 100% to 120% of tap value?  
As the percentage of tap value goes under 120% the torque level is very weak and the times are not consistent. The relay is rarely used on those low values.
- What is the difference between the obsolete IAV51D3A and replacement IAV51D9A?  
The model 9A is equivalent in the application with the same electrical connections and characteristics. The main difference is the type of capacitor that in the old 3A model was a PCB capacitor and in the replacement 9A is a Paper-Oil fill type RCA can capacitor.



Frequently Asked Questions:

HFA

- What is the inductance and capacitance of the coil used in the HFA151A2F relay?  
The coil 366A925G-2 has an inductance of 40.9H and a capacitance of 59.2 nF.
- How can I change the contact code in an HFA relay?  
Contacts can be changed from normally open to normally closed or vice versa by removing the fixed contact, turning it over and replacing it. Then the relay should be check for contact wipe and gap and adjusted as per the IB.
- What is the Century Coil conversion kit for the HFA65D relays?  
There is no Century coil available for the HFA65D relay.



Frequently Asked Questions:

HGA

- What is the inrush current for the HGA11J52 relay?  
We measured the inrush current in a relay to be 1.2 Amps.



Frequently Asked Questions:

ICR

- The Instruction Book for the ICR51A relay gives an operating time for the contacts to go from open to close but does not give a time from closed to open. What is this time?

The ICR has only one NO contact and therefore the only published time is the operating time of the NO contact when voltage is applied from zero. The time to open the contact when it is closed is in the range of half cycle or less depending on the magnitude of the voltage that was applied.



Frequently Asked Questions:

CEH

- How are the contacts of the Target and Seal In unit, Auxiliary relay and MHO unit reset?

The Seal In and Auxiliary relay contacts reset automatically when the I and V applied are lower than the drop out values of the units. The MHO unit contact reset when the inputs, V&I and their angles, are outside the operating range.

- Is the 66 to 83 milliseconds delay before the MHO contact closes?

The built in delay is the overall time that the relay contacts A and SI will operate.



Frequently Asked Questions:

NGV

- What is the repeatability of the relay?  
Repeatability is the closeness of agreement among repeated measurements of the same variable under the same conditions. The NGV's pick up and drop out values can be changed by calibration performed by the user. Once a pick up or drop out value has been selected they will repeat within +/- 2%.
- What is the accuracy of the relay?  
Accuracy is the difference between the measured value and the standard or ideal value. In the NGV the setpoint value is fixed by the user and therefore the standard value is actually the measured value.
- What is the drift between calibration cycles?  
Drift is an undesirable change in output over a period of time unrelated to the input, environment conditions, etc. There is no data on drift for the Electromechanical relays however it is expected that if the maintenance schedule is followed drift should be minimal on these relays.



Frequently Asked Questions:

HEA

- We are using a rectifier / resistor assembly recommended by GE to protect the coil but the contact series always burn. Can we sue in parallel of these contacts one series resistor and capacitor to solve this surge transient?

The rectifier / resistor assembly is intended to protect the HEA tripping coil against surges at the tripping current. The contacts are rated according to the Instruction Book to interrupt at 250V DC from 0.75 Amps (1 contact) to 8.0 Amps (4 contacts in series) for a non-inductive circuit or from 0.7 (1contact) to 6.5 Amps (4 contacts in series) for an inductive circuit. However if the application is to interrupt much higher currents some kind of surge suppressor circuit must be used. The rating of this circuit must be high enough to prevent any shorting or permanent damage at this high voltage peaks.

- We have observed that if the HEA is not tripped for a period of 3 to 5 years, the very first time it is exercised after this period, the trip time is noticeably slow. Trip times are normal after that. What is the corrective action to this problem?

In the IB GEH-2058 page 7, under maintenance, there is a paragraph requiring the relay to be tripped electrically on a yearly basis to insure that is in good operating conditions. The trip unit is completely electromechanical with springs, gears, shafts, latch and many other parts that should be actuated at least yearly to avoid trip problems.



Frequently Asked Questions:

IAC

- I am aware that the transformer inrush current cause induction disk relays to operate faster. However, I am unable to find a reference that provides guidance on how much faster so that I can set the relay so that it doesn't trip.

The higher the frequency the faster the relay. However we don't have any publication with a guideline or reference on the settings when 2<sup>nd</sup> harmonics are present with the transformer inrush current and the way they will affect the pick up and TOC values.

- Is the Tropicalization option still available on the relays?  
This option has not been in our catalog for the last 20 years. All our equipment is suitable for operation under an ambient temperature of  $-20\text{C}$  to  $+55\text{C}$ . The applicable standard is ANSI/IEEE C37.90 for Relays and Relays systems.



Frequently Asked Questions:

GES

- Can you still repair a GES11F21A?

The GES11F21A is a museum item. It is 30 years old. It has vacuum tubes technology and a separate transformer box. We can not test or repair it.



Frequently Asked Questions:

BDD

- Can you repair a polarizing relay?  
We don't have a process to repair field units (customers) Sigma relays (BDD polarizing relays). We do provide new Polarizing units for sale as renewal parts.
- I need the part number for the Through Current Transformer for a BDD18B3A relay. The Parts Bulletin gives 5 different part numbers for this transformer. Which one should I use?

The full TCT assembly part number for the BDD18B is 116B6690G-10. This assembly comprises several CT's in it. The five CT's have different part although all have the same coil and laminations. The difference is the length of the terminal cables. Depending on the stud number that go into the relay there is a different CT as follow:

Relay Stud	CT 0116B6691	
3	G-2	
4		G-3
6	G-10	
7		G-8
8		G-9

- In the BDD instruction book GEH-2057 page 13, it suggest that the relay dropout be tested after all the other tests are complete. The IB indicates that the dropout current should be 0.1 Amps or more. Should this be 0.1 or less?

The statement: "Dropout current should be 0.1 Ampere or more" is correct. The test is to check that the Auxiliary Relay drops out at very low current when the polarized operating element should reset. The idea is to be sure that at least 0.1 amps or higher the unit drops out. If this dropout is lower than 0.1 then the polarized element is bad and must be replaced.



Frequently Asked Questions:

PJC

- Have the PJC , instantaneous overcurrent relays, been re-instated? Are they obsolete?  
The PJC family was reinstated. They still can be ordered.



Frequently Asked Questions:

HSA

- Is the HSA relay available with electric reset?  
No, they were never available with electric reset.



Frequently Asked Questions:

Distance Relays

- Do we have any Service Advice Letters concerning the PCB's capacitors in our relays?

No, there is no SAL regarding this issue. However back in 1979 all PCB's filled capacitors were disposed. Already they had been changed to other Paper-oil fill dielectric types such as: Dielektrol I and III, Dodecyl and Geconol.



Frequently Asked Questions:

IFC

- When did the IFC relay become High G on the Target and Seal In Unit?  
The IFC family was developed back in 1975. Since the beginning it used the Hi-G units. These units have been available since 1973 and almost all our relay models were converted at that time.
- We have relays installed more than 10 years ago and are showing some sort of residue buildup on the disks. The concern is that this is getting thick and may interfere with the operation of the relay. Have you heard of this problem before?  
We have very few records of this corrosion. The situation observed in this relay is rare. Similar corrosion has been reported in the past once or twice on old relays and has been traced to poor environments (paper and steel mills) containing traces of salt and chemical vapors. This corrosion could affect the operation of the relay if it builds up to physically interfere with the motion of the disk. The corrosion can be removed from the surface of the disk by taking out the relay from its case and carefully filing off the corrosion using a fine file, such as an emery board or metal nail file.



Frequently Asked Questions:

ET Lamps

- Will the H<sub>2</sub>S gas cause any deterioration of the materials used to manufacture the ET-16 Indicating Lights?

There is no data regarding exposition to H<sub>2</sub>S gas. The ET-16 use different materials: plastic, metal, ceramic and glass that may be or not affected when exposed to high concentrations of this gas. The standard that we use for Usual Service Conditions is the ANSI / IEEE C37.90 – 1989 Standards for Relays and Relay Systems.