GARD

Unparalleled Protection

VIA

The I-Gard VIA is a Voltage Indication Alarm unit created to provide an early warning in the event of a single ground fault and to indicate on which phase the fault occurred.

The VIA has been designed specifically for ground fault Indication on Wye or Delta-connected, three-phase, three-wire, resistance grounded or ungrounded power systems. It may be used on systems between 120 volts or 600 volts (up to 690 without CSA approval) or up to any voltage with the use of 120 volts or 240 volts potential transformers (PT's) on each phase.

Additionally, the VIA can detect DC ground faults on Variable Frequency Drives that are on AC fed systems. One or more optional flush mounted external displays (VIA –R) can be mounted on panel doors or other locations. Optical Isolation inside the VIA protects the external displays from high voltages.

BENEFITS OF THE VIA:

- Ensure service continuity by providing immediate local indication and alarm contacts for remote alarm.
- Suitable for any production plant
- Ground Fault Indication on Wye or Delta-connected, 3-phase, 3-wire.
- The VIA does not require any external hardware, sensors or power source (each phase is fused inside the VIA enclosure).
- The VIA can be used on higher system voltages with the use of potential transformers.
- Suitable for an independent ground fault alarm unaffected by loss of control power.
- CSA approved

Bright LED lamp technology used for indication
Powered directly from the 3-phase voltage
Contains 2 auxiliary relays for external indication
Plastic enclosure with knockouts for convenient mounting
Isolated flush mount external displays (optional)

FAULT INDICATION

The status of each phase is represented by an LED lamp on the front of the unit. The LED's are labelled A, B, C corresponding to the connections within the VIA.

VIA

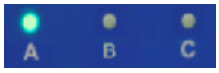
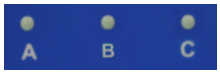
I-Gard VIA		Other Voltage Indicators
	Healthy	
	Ground Fault	
	Partial Ground Fault	
	Bulb blown	
	More than one fuse is blown	

Table 1: shows all possible conditions that can be displayed using the LED lamps.
* % of the neutral voltage displacement from ground where ground potential is 0% and line to neutral voltage is 100%

When indicating DC faults the VIA does not apply the 20% and 50% level thresholds. However, it does distinguish between direct DC faults (RED) and negative to ground DC faults (YELLOW).
In addition to visual indication, the VIA is equipped with two auxiliary relays which operate as follows:

Condition	State of 20% Relay	State of 50% Relay
No fault or fault is less than 20%	Open	Open
Fault level is greater than or equal to 20%, but less than 50%	Tripped	Open
Fault level is greater than or equal to 50%	Tripped	Tripped
Phase is lost or fuse blown	Tripped	Open
Negative or Positive DC Fault (low level)	Tripped	Open
Negative or Positive DC Fault (high level)	Tripped	Tripped

Table 2: Relay Operation

TECHNICAL SPECIFICATIONS

Control Power	120-690V AC, ±10%, 50/60Hz (CSA approved up to 600V AC) 3-phase		
	4VA @ 120V AC	12VA @ 208V AC	15VA @ 240V AC
	45VA @ 415V AC	60VA @ 480V AC	100VA @ 600V AC
	125VA @ 690V AC		
Temperature Range	Operating Temperature: -40°C to +65°C Storage Temperature: -40°C to +85°C		
Isolation Voltage for External Display	AC RMS: 5000V		
Ground Fault	Pickup Settings (as a percentage of total neutral voltage displacement): GREEN 0%-19%, YELLOW 20%-49%, RED 50%-100% Pickup Tolerance: ±15%		
Output Contacts	Type: Form C (Normally Open, Common, Normally Closed) Rating: 10A @277V AC, 5A @30V DC		
Replacement Fuse	Cooper Bussmann LLC, cat TDC111-		
Physical	Weight: 0.40kg (0.88lbs) Dimensions: 6.57"L, 4.92"W, 3.22"H		

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