

Fault Zone – Insulation

The Insulation fault zone refers to the condition of the insulation between the windings and ground. For electrical equipment to operate properly and safely, it is important that the flow of electricity take place along well-defined paths or circuits and that it not be leaking from one path to another. Deterioration of the insulation systems can result in an unsafe situation for personnel exposed to the leakage current

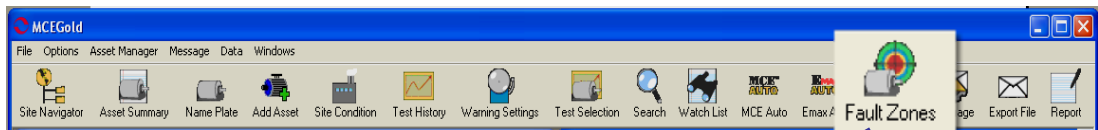
The MCE™ technology allows you to identify potential problems with the insulation by recognizing adverse trends in resistance to ground. After conducting a baseline test, all subsequent tests are compared to the initial data with significant changes in value highlighted in yellow for caution or red for alarm.

AC Standard	Polarization Index	RIC	Step Voltage
	A	B	C
Test Date	9/28/1996	3/23/1998	3/29/1999
Test Time	9:47:45 AM	9:11:11 AM	12:32:07 PM
Test Location	Motor Leads	Motor Leads	Motor Leads
User	Administrator	Administrator	Administrator
	Baseline		
Frequency	1200	1200	1200
Charge Time	30	30	30
Voltage	1000	1000	1000
Motor Temp	40	34	42
Measured Mohm	770.00	850.00	430.00
Corrected Mohm	770.00	505.00	490.00
mH Ph 1 to 2	1.975	1.990	1.980
mH Ph 1 to 3	1.985	1.995	1.985
mH Ph 2 to 3	1.970	1.980	1.965
Average Inductance	1.977	1.968	1.977
Imbalance	0.19	0.63	0.18
Imbalance	0.42		

Trend degradation of insulation over time.

VOLTAG	Fund RMS	Test RMS	C.F.	THD
Voltage 1-2	452.98	453.46	1.40	1.28
Voltage 2-3	0.09	0.10	5.12	34.48
Voltage 1-3	452.72	453.20	1.40	1.30
Average	301.93	302.25		
% Imbalance	99.97	99.97		

In an ungrounded voltage distribution system, the EMAX technology immediately assesses and displays any component on the distribution system that may be grounded.



Fault Zone	Test Type	Value	Date	Condition Code
Power Circuit	Voltage Imbalance (%)	1.11	3/28/2002 11:27:57 AM	Caution
	Resistive Imbalance (%)	0	3/17/2003 11:08:51 PM	Caution
Power Quality	Voltage THD Ph-Ph (%)	1.83	3/28/2002 11:27:57 AM	Good
	Current THD (%)	1.85	3/28/2002 11:27:57 AM	Good
	HVF (%)	0.01	3/28/2002 11:27:57 AM	Good
Insulation	Stator RTG (Meg)	0.80	3/17/2003 11:08:51 PM	Severe
	Stator Imp. Imbalance (%)	0.38	3/28/2002 11:27:57 AM	Caution
Rotor	Inductive Imbalance (%)	0.20	3/17/2003 11:08:51 PM	Caution
	Rotor Fp Amplitude (Delta dB)	53.64	3/28/2002 11:39:30 AM	Good
Air Gap	Eccentricity			
	Peak One (Delta dB)	-9.36	3/28/2002 11:48:15 AM	
	Peak Two (Delta dB)	9.93	3/28/2002 11:48:15 AM	
	Peak Three (Delta dB)	28.80	3/28/2002 11:48:15 AM	Insufficient Data
	Peak Four (Delta dB)	6.78	3/28/2002 11:48:15 AM	
	RIC (Eccentricity)	Not Tested		

The MCEMAX powered by MCEGold™ provides a Fault Zone Report, which is a one-page summary of the test results relevant to the six fault zones. The Fault Zone Report may be reached directly through the Fault Zones icon on the toolbar.